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MATTER IN THE IONIZED STATE.*

FRANK T. F. STEPHENSON, Ph. G., M. D.
Detroit.

All matter, according to our present theory, is indefinitely divisible. It may be considered in the states of division we term mass, molecule, or atom, the first being, of course, demonstrable to the ordinary senses; the latter two being theoretical divisions, and capable of demonstration only psychologically, by the use of deductions in turn based upon certain observed physical and chemical facts.

This atomic theory of Dalton, as it is called, is the foundation of the modern science of chemistry. It is interesting to here note that while the name of Dalton is so closely identified with the Atomic Theory, as a matter of fact, he did little of the work which led to its formulation. Lavoisier probably did most of the actual experimental work which forms the basis of the theory, and he had really established the fundamental facts by the year 1786, when Dalton was but a boy of twenty years. Sixteen years later, or in 1802, Dalton published his first table of atomic weights. He was more a philosopher than chemist, and to him belongs credit for getting the work of his predecessors into concrete form, and from this material, evolving in stated form the more or less generalized statements of the individual observers, thus developing a rational theory.

According to the theory as thus formulated by Dalton, a molecule is the smallest portion of matter that can exist alone, while an atom is considered as the ultimate division of matter; the smallest portion that can exist, even in combination. With this conception of the constitution of matter, the theory received strong support from the verification given by certain other discoveries. Quantitative chemistry had developed to such a degree that the proportions in which elements combined to form compounds could be determined, and the formulation of the atomic theory of the constitution of matter was hastened by the discovery of the laws of constant, reciprocal, multiple and compound proportion. The theory and the observed facts coincide so well, that there appears very strong evidence of a systematic scheme or plan in the chemical construction of matter. Gay-Lussac's law of the relation of gaseous density to atomic weight, Avogadro's law on the molecu-

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lar volume of gases; the law of Charles, which deals with the effect of temperature upon gases, and the law of Boyle relating to the pressure exerted by gases and liquids, all strengthen the Atomic Theory. Stress must be laid here tonight, however, upon the important consideration that while the observed facts support the Atomic Theory, *they do not limit it.*

It is to be noted that the Atomic Theory is an essentially physical theory, upon which has been erected a great chemical superstructure. The more recently discovered chemical facts, however, have led to the conception that the chemical atom must be different from the physical atom. Especially with the development of electrochemistry, have new properties been found, which are incompatible with the simple atomic condition of Dalton. When Roentgen promulgated the discovery of the X-Rays in 1894, to be shortly followed by the discovery of radium, a crisis was reached for the Atomic Theory, and either the theory inself would have to be abandoned for some new, and yet unformulated one, or else it would have to be amplified, to cover the newly discovered facts. With the knowledge obtained from the study of the X-Rays, and the emanations of radium, many old observations receive new significance. Brief reference may be made as follows:

The early frictional electric machines produced sparks, or heat, light and sound, and a limited amount of chemical action, but led to no recognition of the nature of the electricity itself. Geissler, in the early 70's produced the tubes named after him, in which the electric spark was led through a comparatively poor vacuum. Various gases were used, the color of the light produced being dependent upon the particular gas. But little heat resulted from the passage of these modified sparks, which were made possible by the reduced pressure of the air or gas within the tubes which was only about .015 pounds per square inch. The electric current, in the form of a spark, passed directly from the anode, or positive pole, to the cathode or negative pole, and these Geissler rays must be considered to be nothing more than modified sparks. Much interest was evidenced in these Geissler tubes, and in 1879 Crookes, by the simple expedient of reducing the pressure of the gases in his tubes to .000015 (pounds) per square inch revealed new fields of investigation for the scientists of the world. These new tubes always produced a light, apple-green light, regardless of the gas contained. Definite rays were developed, which appeared to stream from the cathode alone, instead of passing from the anode to the cathode. These rays could not be light, for they are sharply deflected by a magnet. They conduct electricity. When impinging upon the vanes of a movable wheel, rapid revolution results. They can be demonstrated to be parallel in distribution, and when intercepted, they produce great heat. If electric currents be passed through parallel rays, these rays diverge, in a manner exactly analogous to a pair of magnets, suspended near to each other, or to a pair of freely suspended wires, through which a current of electricity is passing. Crookes also found that metallic mirrors suspended within the vacuum tube would reflect these rays. Little was learned of the nature of rays thus produced, and for a number of years, radiant energy, as it was called, was of much speculative interest to physicists.

In 1894 Roentgen investigated these rays, with particular attention to their effects *outside the tube.* He found that their properties were greatly altered by reflecting them through the walls of the tube by inserting a metallic mirror into the path of the rays streaming from the cathode. These reflected rays, when examined outside of the tube in which they

were generated, differed in many respects from the rays as produced by Crookes. They were no longer deviated by magnets or electric currents, nor could they again be reflected, refracted or polarized. New properties were discovered in these rays. For instance, when they fell upon certain salts, fluorescence appeared. They penetrate wood, flesh, glass, etc. They reduce the silver of the photographic plate and they destroy the lower forms of life. They travel in straight lines, and when they pass through gases, they produce some altered conditions in the ultimate structure of the gas traversed, whereby the gas becomes an immensly better conductor of electricity.

Rays presenting similar properties emanate from radium and its preparations. During the last five years, much study has been given to these rays, and the results of this study are embodied in the Electronic Theory which may be considered an amplification of the Atomic Theory. According to this addition to the theory, elements are composed of atoms, which in turn are composed of more minute particles, termed electrons. The atom of hydrogen, for instance, is assumed to be composed of something over 800 electrons, each carrying, or possibly being composed of, a unit charge of negative electricity. These 800 separate negative charges are held into one co-ordinate whole by a positive charge, of sufficient value to hold the negative charges into place. When some force, as an electrical discharge from an exterior source, acts upon the atom of hydrogen with sufficient force to dissipate or remove this retaining positive charge, the negative charges, or electrons are liberated as free particles, to evidence themselves as cathode rays; for instance, when this result occurs in a Roentgen tube, containing a rarified gas. *Since all gases, when treated in the Roentgen tubes, by the same currents, produce the same rays,* the natural assumption must be that all electrons are the same in character. If this be true, the ultimate constitution of all matter is the one thing. The eighty odd different elements then must be but variations of the one primeval substance. If 800 electrons per atom is hydrogen, 1,600 may be some other element, and 3,200 still another. The transmutation of the elements, the dream of the alchemist, then becomes possible. Recent results, which appear to demonstrate the change of radium to helium, and the degradation of copper to lithium, results obtained in the coldly sceptical scientific laboratory, *not* the philosophical production of the heated brain of the theorist, make the electronic theory assume formidable proportions.

Under certain physical conditions, some chemical compounds develop peculiar phenomena. For instance, if a lump of sugar be dissolved in a glass of water, the water remains a non-conductor of electricty, and its freezing point is lowered, in exact proportion to the amount of sugar thus dissolved. If, however, a lump of common salt be substituted for the sugar, the solution thus secured conducts electricity easily, and the freezing point presents abnormalities, and the more dilute the solution, the greater the proportional abnormality. Stress is here laid upon the fact that the more dilute the solution, the greater the departure from the normal physical result.

More space cannot be given at this time to further illustrate the remarkable results obtained by the apparently simple act of dissolving a solid, except to note that a substance in solution no longer follows the laws governing solids. Instead, the moment a solid is dissolved, especially capable of demonstration for salts in solution, these solids conform to the laws of gases.

It is assumed that the act of solution

separates the compounds into their component elements, in proportion as the solution is dilute. The freed atoms composing the compound, each carrying their free charge of electricity, are different from the atoms as we know them chemically.

Matter in the ionized state, then, may be here defined as matter existing in the free atomic condition, each atom carrying a charge of free or unneutralized electricity. This charge of electricity may be positive or negative in character, hence we may consider these ions as electropositive or electronegative. Matter may exist in this state, either in the gaseous or the liquid condition (in a solution). The conduction of a current of electricity through conductors of the second class (liquids, fused solids, etc.) is dependent upon this ionic state, and liquids that are not conductors contain no ions. An element in the ionized state possesses different properties from those generally associated with that element. Chlorine exists in the diluted salt solution, for instance, in the ionic state, but it is not evident by its color, odor, bleaching power, etc. Direct through the solution a current of electricity and the ions travel each way to their proper electrodes, deliver up their charges of electricity and are set free as ordinary chemical atoms. The chlorine bubbles out of the solution and quickly makes its presence known by all of its chemical and physical effects.

It must not be assumed that whenever a compound goes into solution, that its atoms assume the ionized state. As a matter of fact under our present limitations of experimental knowledge, most of the proved up experimental work has been done in aqueous solution, the dissolved compounds being salts as a rule, using the term salt in its restricted chemical sense. From the associated chemical and physical phenomena, the relative degree of ionic dissociation can be determined. It is noted that certain substances added to solutions will increase the dissociation, while other substances prevent, to some degree at least, the ionization. As an example, copper in solution may be cited. It has been determined that a solution of cupric sulphate of the strength of .015 grams per liter, is deadly to certain lower forms of life. A very efficient method for water purification in reservoirs and ponds contaminated by low forms of vegetable life that injure the taste of the water, is based upon this fact. The mere act of rowing around such a pond or reservoir a boat which has suspended over its side a sack of cupric sulphate will absolutely destroy the offending organism, yet the amount of the copper dissolved in the water is so infinitesimal as to almost defy detection, and is in no way deleterious to the qualities of the water for human consumption. The condition for greatest ionization is here obtained, that is, extreme dilution, and the copper ions destroy the vegetation. You will recall the statement made earlier, that the degree of ionization increases with dilution. It is not the amount of copper salt in solution that is of import: it is the amount of copper in the ionic state. The same organisms that perish in a solution containing only .0015 grams per liter of copper sulphate in aqueous solution, will tolerate 160 grams of the same salt in alkaline solution, if sugar be added. Here the ionization is prevented by the presence of the sugar, hence the lessened activity.

The same thing is very well shown in the case of carbolic acid. It is easily demonstrated that if equivalent quantities of this compound be dissolved in water, and to one add sodium chloride, and to the other sodium acetate in equivalent amounts, the disinfecting properties of the first solution greatly exceed those of the latter. Nevertheless, carbolic acid is much less soluble in a saline

solution than in the acetate solution.

The mercury salts offer excellent illustrations of the ionic activity. Taking solutions of the halogen salts of mercury, each containing exactly the same amounts of mercury per volume, and wide variation will be found in the bacteriologic activity. It must therefore be evident that it is not a question of how much mercury, but the condition of the mercury, which determines its value as a germicide. The bichloride is the salt ordinarily thought of as the active germicidal agent of the mercury group. It is soluble in about 16 parts of water at ordinary temperatures. The iodide, on the contrary, is but slightly soluble. It has been demonstrated, however, that the latter salt is much more active than the former, from the bacteriologic point. The mercuric iodide soap of a well-known manufacturing firm undoubtedly owes its well-proved success to the ionic state in which the mercury is liberated and used. Mercurous chloride, or calomel, is another compound which presents very limited solubility, associated with remarkable activity. It has been demonstrated, I believe, in Europe, that the application of a calomel paste to the exposed surfaces, with contact for a certain length of time, is sufficient to secure immunization, if applied immediately after exposure to infection by the spirocheta pallida. It has been stated that this result is not obtainable by any other germicidal measures. The writer is not a syphilologist, yet ventures to predict that precisely the same results may be obtained with other very slightly soluble salts of mercury. The experience of the profession has shown that mercury is the only agent to be depended upon in the treatment of syphilis. The same experience has demonstrated the efficacy of the protoiodide as a most desirable combination and some physicians now use this compound from the very beginning of the disease. From the standpoint of the chemist, this is ideal treatment, for a large amount of mercury in its most active, or ionized state, can be thus exhibited, in an eligible form.

Reverting again to copper, it is well known that if water containing bacteria be placed in a polished copper vessel for a certain time, all the bacteria are destroyed, yet the water will not acquire enough of the metal to affect its taste. Here an infinitesimal amount of copper is dissolved, and in the extremely dilute, or properly stated, ionized state, the copper ions destroy the bacteria, possibly with the electric charge they carry. It is pleasant to picture the electrocution of our enemies, the pathogenic bacteria, by so simple a method. It is well known that bacteria will not grow well in gold or platinum vessels, and that the passage of a platinum needle over a culture of rapidly growing bacteria, leaves a streak of death behind it. Many elements show such remarkable properties, when studied in very dilute solution.

It was stated heretofore, in this paper, that the ionization might be prevented by the addition of certain substances to the solution, as in the case mentioned, the alkaline solution of copper, containing sugar. It has long been well known that a mixture of two excellent germicides might make a solution not at all active. This we may assume is due to the fact that each prevents the ionization of the other. An amusing result of this fact, not always recognized in the past, is presented in the history of a certain product made in the city of St. Louis. One firm had a germicidal solution of large sale. A rival firm made a similar solution, but much improved, according to the reading of the formula. To go after the bacteria with this new preparation appeared like hunting partridge with an eight-bore shotgun; it didn't appear possible that anything could get away, for if one germicide did

not get them some other of the many present would. The compound was launched with great bombast, and it was distributed with all the thoroughness that plenty of money could secure. In the course of a few months most of it returned to the manufacturer, for the great germicide would not keep. Instead it grew full of moulds. As a germicide it was about as valuable as a solution of vinegar.

Leaving bacteriology, we learn that in the physiology of the body this ionic activity plays an important role. Cane sugar, when ingested, is inverted to grape sugar, and thus absorbed. It can be demonstrated in the test tube that this inversion takes place with the use of many acids, but that the rate of inversion is directly as the amount of ionic hydrogen present. The same thing applies in the matter of the digestion of proteid. For instance, albumin may be digested by pepsin in the presence of either hydrochloric or acetic acid. Taking equivalent amounts of all the material, it will be found that the rate of digestion proceeds very slowly in the presence of the acetic acid. In fact, the rate will be several hundred times slower than when hydrochloric acid is used. We find in the laboratory experiments that the hydrogen of the hydrochloric is present in the ionized state, to a degree at least 300 times greater than the hydrogen in the acetic acid. This fact assumes significance in medicine in the treatment of diseases of the stomach, and coincides with many facts already clinically determined, where acetic, lactic, and other organic acids have been found in the stomach contents, in connection with difficulties in digestion, etc.

The ionic theory applied to the production of hydrochloric acid in the stomach brings out some interesting considerations. The physiologists say that the acid is a specific secretion of certain cells in the gastric mucosa. This is as far as Hammarsten goes into the subject. Simon handles the subject as follows: "While it is thus clear that the hydrochloric acid is furnished by the parietal cells, we are as yet ignorant of the mechanism by which this is accomplished. A free acid is manifestly not present in these cells.... It thus follows that a substance must either be present in the cells which is capable of yielding hydrochloric acid when secreted to the outside, or a mechanism must exist by which the hydrochloric acid, though formed within the cells is at once eliminated. The latter view is now generally held. That the hydrochloric acid is derived from the chlorides of the blood can be regarded as an established fact." Later on, in the same chapter, Simon gets very close to the real explanation, in the light of the ionic theory, but misses the precise facts of the case.

We have pointed out that the ionized state is dependent upon dilution, and that complete classification of any salt is dependent upon an extreme but fixed point of dilution. To return to the first part of this discussion, we must recall that Crookes secured his cathode rays because he pushed his vacuum to a degree far greater than Geissler ever did. The gas in an Xray tube may be assumed to be an extremely diluted or rare one. Under this condition the passage of the electric spark is able to bring the corpuscles of gas into a form discernable to us, in the multiform effects of the rays. That this is not the result of changes in the electricity passed into the tube, but of the gas we well know, from the changes which take place within the tube itself. The vacuum changes in use, and a low tube, as the radiographist calls it, becomes a high tube under constant use. However well constructed tubes may be, they ultimately reach a point when the vacuum must be lowered by the admission of new material, which need not be of necessity the

original gas contained in the tube.

It has been emphasized several times that in solution an extreme dilution is necessary, in order that the salts may assume the ionic state. Having reached this state, we are able to show by directing the travel of these ions by a current of electricity, that all ions do not travel with the same velocity; that is, that each element in its ionized state has a special velocity of its own. We also know that substances in solution conform to the laws of gases, and not to those of solids. As a body of gas is assumed to be composed of innumerable particles, all in a state of rapid motion, we explain the pressure of gases upon the retaining walls to be due to the impact of these minute particles against these walls. We can apply the same reasoning to solids in solution, and the extent of this solution pressure is far greater than ordinarily realized. It can be measured exactly as we measure any other kind of pressure, and pressures as high as 60 to 65 pounds per square inch have been observed. If, for instance, a dilute solution of sodium chloride be enclosed in a porous container, so constituted that water can pass through the pores but the salt cannot do so, on immersing this arrangement in pure water, this pure water attempts to force its way through the pores of the container, entering the salt solution, to dilute it, and liberate the chlorine and the sodium to the ionized state. If the porous container be sealed shut, unless it be very strong, it will be ruptured, bursting from the pressure upon it. If, on the contrary, this porous jar be strong enough, a tube may be fitted into the top of it, and the pure water may be prevented from entering by pressure applied to the salt solution. The amount of pressure needed will surprise the unfamiliar experimenter, for as suggested heretofore, it may rise to the vicinity of 70 pounds per square inch. Every surgeon is recognizing this fact when he uses normal saline solution instead of pure water in his surgical work. The cell is the porous container, and the blood serum is the salt solution, in analogy to our experiment used in illustration.

When the retaining wall is permeable to the dissolved material, this wall or diaphragm assumes a special function in separating the ions, as they segregate into new combinations as the results of their differing velocities. Suppose, for instance, we have any suitable container, holding pure water. Immersed in this we place a suitable porous container, permeable to the elements. Into this porous container we place water, sodium chloride and carbonic acid. In accordance with the dilution of these will the elements exist as free ions. After a few moments, examination of the formerly pure water, around the outside of the porous container, will demonstrate the presence of hydrochloric acid. Here we have them, secretion of hydrochloric acid taking place, without the presence of any specifically specialized life function entering into the matter. We have reproduced the essential factors of parietal cells of the gastric mucosa, and another so-called organic chemical process proves to be but inorganic, after all.

The explanation is not hard, when we know that it can be demonstrated by other means that the chlorine and hydrogen ions travel at greater velocity than the sodium and carbon; therefore the first two pass through the membrane faster than the others, to meet and combine as hydrochloric acid. The ions doubtless exist in the pure water, at infinite dilution, as free ions, but our crude tests applied to the solution bring them into true chemical combination when we precipitate the chlorine in an insoluble chloride.

The study of this subject is fascinating in the extreme, and we can predict wonderful results from its pursuit. If

no new discoveries be made the assistance given in the way of explaining many things now known only in the abstract makes further investigation worth the effort. The action of ferments and enzymes, especially those results obtained by metals in the colloidal state; the exact function of the minute amounts of arsenic, iron and manganese found in the human system, and the effects produced by the administration of elementary compounds generally must assume new significance to the physician, when viewed in the light of this amplification of the old Atomic Theory.

The effect upon the lower forms of life, of elements in the ionized state, naturally brings up the question of the effect of such ions upon the human system, when administered internally or otherwise, as medicinal agents. The extreme dilution so favorable to extensive dissolution and ionization recalls the practice of the followers of Hahnemann who practice medicine upon the basis of the dictum Similia Similibus Curantur, and the theory that medicines are dynamatized, or potentized by a method of preparation peculiarly developed by Hahnemann and his followers. It is sufficient to here say that the basic idea of this school of medicine is treatment by similars, and the practice of those who pretend to be homeopaths today is so far departed from this basic principle of the founder of the school that it is no longer proper to consider them true homeopathists. The other principle associated with the practice of Hahnemannism is the diluted dose, a principle introduced by the founder in the latter part of his career. Much ridicule has fallen upon these practitioners for their 200th potency, etc. As we read the laborious directions and weird methods of preparation outlined by Hahnemann, partaking as they do of everything between the incantation of the aboriginal medicine man and the blind theologic faith of that anamolous being who calls himself a Christian Scientist, we can see much that is ridiculous to a sane mind. The writer is inclined to believe at present, however, that Hahnemann had a glimpse of a great scientific principle, which he incorporated into his system and buried in a lot of rubbish bearing some resemblance to therapeutics. Liebig, the great German chemist, was contemporary with Hahnemann, and he, too, recognized many chemical phenomena which are easily explainable by the ionic theory. To read his Chemical Letters again with the aid of this theory is a renewed delight. Even the elder Virchow, a hard fighting opponent of Hahnemann, made the following admission: "On the contrary, a minimum of a very energetic exciter may produce lasting and great results, in consequence of the continued spread of the original catalytic movement. This is one of those facts which render the possibility of the so-called homeopathic effects intelligible. We do not mean to admit by this statement that homeopathy has any claim to a scientific character."

The regular school of medicine, which we represent, is not tied down by any doctrine, nor is it built upon the dictum of any man. We recognize all that is scientific, and ask not its source.

Matter in the ionized state, recognized as such, will enter largely in the therapeutics of the future, and the attention of the profession should be directed to the study of the therapeutic effects obtained when medicinal agencies are thus exhibited.

DYSMENORRHEA*

REUBEN PETERSON, M. D.,
Ann Arbor.

If I understand it correctly, those who have been asked to take part in this symposium upon the disorders of menstruation are expected to stick to the more practical aspects of their respective subjects. Interesting as such theories may be, it certainly is asking too much of the busy practitioner to sit and listen to theories regarding menstruation and its disorders. Their time would be more profitably spent in the careful consideration of one of the many cases of dysmenorrhea they are obliged to treat in their own practice. Yet it will do no harm and may be productive of some good if a résumé be presented of what we consider essential in any consideration of dysmenorrhea. If my deductions as regards the diagnosis, prognosis and treatment of the disorder do not agree with yours, so much the better, for the value of any symposium or any medical paper before a society such as ours lies not so much in the paper as in the discussion it may arouse.

Literally, by dysmenorrhea is meant catamenial discharges accompanied by pain. By common acceptation, however, this definition has been extended so as to include the pain preceding or following the regular monthly discharge of blood from the uterus, provided such pain can etiologically be ascribed to the menstrual flow.

If menstrual pain were simply an indication of a disordered genital apparatus, the task of relieving that pain would be a comparatively simple matter. But the reverse is the case. The discharge of blood from the engorged uterus is but one of the manifestations of the menstrual function. The entire organism is affected by the recurrence of the menstrual flow, as shown by the changes in temperature, pulse and blood pressure. Hence the general make-up of the individual, both nervous and physical, must be taken into consideration in any endeavor to ascertain the cause of pain during the menstrual period. It is most convenient, therefore, to group patients suffering pain at their menstrual periods into two large divisions.

A. In this division may be placed those patients who suffer during menstruation because of defects in their general nervous system, very slight or no derangements of the genital apparatus being ascertainable upon physical examination.

B. In the second division may be grouped those patients whose pain is associated with and probably due to one or more distinct local pelvic lesions.

It must not be lost sight of that any classification of such a symptom complex as dysmenorrhea must be more or less arbitrary and not altogether satisfactory. For example, while a patient may have distinct local lesions, such as an endometritis or a displaced uterus, the menstrual pain may be so out of proportion to the extent of the lesion or lesions as to relegate the patient to the first rather than the second division. But, on the whole, I believe the above simple classification will be useful and

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hold good in the large majority of instances.

A. **First division. Pain due to general and not to local causes.** Patients in this group are the most discouraging of any with which the physician has to deal. No local cause can be found for the most excruciating pain which may attend their menstrual periods. The uterus and its appendages are usually well developed and apparently perfectly able to perform their functions, yet menstruation is a perfect nightmare to the patient, because of its accompanying suffering. Usually such a patient will date her poor health form the time of the ushering in of menstruation. Close questioning, however, of the patient herself or the members of her family will often show that her girlhood was not free from nervous manifestations. It may be learned that she was excessively shy as a child, that she was subject to violent outbursts of temper or of tears or some of the manifestations of an unstable nervous system. The family history will often show neurotic tendencies or actual nervous or mental derangements in father, mother or grandparents. There may be a distinct history of alcoholism, syphilis or such diseases as epilepsy or chorea in the immediate or remote members of the family. The personal history of the patient may show neglect as far as her education or control was concerned. She may have been indulged in every whim so as to do away with whatever self-control she could have acquired through proper instruction.

Such an individual is ill-fitted to withstand the trials and stress of womanhood. The systematic changes accompanying menstruation are enough to overthrow the small amount of willpower she may have retained up to the time of puberty. As the expression is, she goes all to pieces at each menstrual period. Depending upon the exact condition of her nervous mechanism she may at these times be only slightly hysterical from the pain, or she may be almost maniacal under her sufferings. We are all, I think, familiar with this type of patient. They belong to the class commonly known as neurasthenics and are, as a rule, greatly neglected by the profession at large, principally, I believe, because they respond so poorly to treatment. There is no question about their intense suffering at the menstrual period, but on the other hand they suffer at other times perhaps just as much. The most careful physical examination of the pelvis may reveal no abnormality, or the genital organs may be somewhat undeveloped. Usually, however, women of this type are not undeveloped. Physically they may appear to be in fairly good condition. In reality, their nervous systems are greatly deranged.

The treatment will depend upon the peculiarities of each individual case, although any treatment is more or less unsatisfactory. As Oliver Wendell Holmes once aptly remarked, to cure such people, one would have to begin back two or three generations. Yet if the practitioner be the right kind of a man, he can do much for these unfortunate women. He certainly can do more for them than any specialist for he has their confidence and has more influence over them than the comparative stranger. He can do much by way of prophylaxis in regulating the lives of children under his charge. Certain children he knows must have certain inherited neurotic taints, for he is thoroughly cognizant with their family histories. Such children he can watch over, guard and protect and see that they be given the best possible chance. When such a child reaches maturity his knowledge of her case and his intelligent sympathy may do much to make her lot less difficult. His success with patients of this class

will usually be directly proportional to the breadth of his own mental equipment and character. The easiest course to pursue is to pass them along to the next man without actually trying to help them. But this is hardly fair to either ourselves or the patients.

For such patients local treatment is not called for and is actually harmful, since it directs the thoughts of the patient toward the genital apparatus and sexual matters. Having assured himself that there is no local difficulty, the practitioner should use all his influence to prevent such patients, as are under consideration, from being operated upon. For the patients themselves and the wornout relatives and friends will seize upon any excuse for an operation. Uteri have been dilated and curetted, ovaries have been resected or removed where there was absolutely no pathology to warrant such operations. Hardly a month goes by that I do not have a number of patients referred to me for operations which are absolutely unindicated, and my experience is that of all gynecologists.

Not long ago a sngle woman of twenty-two came to me for examnaton. She was a typical neurasthenic with her mind centered upon her genital apparatus and more particularly upon her ovaries as the seat of all her troubles. She had been having electric treatments for three months for painful menstruation and pain in the ovarian regions. She was told if she was not relieved at the end of this time she must lose her ovaries. Bimanual examination showed no lesion in the pelvis, uterus, tubes and ovaries being in good position and quite normal. Yet the patient and friends almost insisted upon my performing hysterectomy, so firmly were they convinced that such an operation would end her trouble.

In concluding this part of our subject I may add that if the conditon of such a patient as we have been considering is pitiable, it becomes doubly so after the removal of the ovaries. The menstruation ceases and in a sense the dysmenorrhea is cured, but at the expense of additional suffering to the patient. She will tell you that she is far worse than before the operation and that her life has been made unbearable by her sufferings after all she has sacrificed to secure good health.

B. **Second division, where the dysmenorrhea is dependent upon some pelvic lesion or lesions.** For the sake of clearness and convenience, this division may be subdivided according to the local causes giving rise to the dysmenorrhea:

(a) Malformed or undeveloped genital organs.
(b) Diseases of the uterus.
  1. Displacements.
  2. Tumors.
  3. Inflammations.
(c) Diseases of the ovaries.
(d) Diseases of the tubes.

Here again it must be emphasized that any classification of dysmenorrhea from an etiologic or other standpoint must be more or less inexact and quite arbitrary. For example, it is quite evident that a patient with a displacement may have and, in fact, as a rule, usually does have accompanying disease of the tubes or ovaries. Hence from an etiologic standpoint her dysmenorrhea could be considered under a number of subdivisions. But as I have already stated, speaking broadly, we can group our patients with dysmenorrhea in either of the two divisions without inconsistency.

(a) **Malformed or undeveloped genital organs.** Undevelopment of the uterus and its appendages does not, in my experience, give rise to dysmenorrhea, unless it be accompanied by a defective or vitiated nervous system. The pain ac-

companying the menstrual flow is not so much an expression of the inability of the uterus to perform its function without giving rise to distress, as it is a manifestation of an organism with an unstable nervous system. Here the genitals, as well as the other great systems of the body, are poorly developed and pain is the result. When the rest of the body is well developed and rightly balanced, a woman may have an infantile uterus and ovaries, menstruate only infrequently and very slightly, yet without pain. The lesson to be learned from this is that an undeveloped uterus does not necessarily call for treatment, especially if in other ways the woman be healthy. If she suffers from dysmenorrhea, treatment should be directed principally to her general condition. Direct stimulation to the uterus and its appendages by electricity and other means is of doubtful value and may be productive of considerable harm through resulting infection and the direction of the mind of the patient too much toward her pelvic organs. Such women are too apt to drift into a state of semi-invalidism with fixed ideas regarding their pelvic suffering. Their thoughts should, whenever possible, be directed away from their pelvic organs, unless treatment, operative or local, be absolutely indicated.

On the contrary, malformations of the genital tract can very easily give rise to dysmenorrhea. Here the causes are distinctly mechanical and arise from an obstruction to the passage of the menstrual fluid through closure of the canal at some point. This closure can occur in any portion of the uterus or vaginal canal, including the hymeneal orifice. Retention of the menstrual fluid gives rise to the colicky pains during the first menstrual periods. These pains, if unaccompanied by menstrual discharge and especially if the other signs of retained menstrual discharge be present, should lead to careful examination under an anaesthetic and the institution of the proper surgical procedure for the relief of the condition. Since the obstruction to the genital tract is usually low down, incision under proper aseptic precautions is usually sufficient to effect a cure.

(b) **Diseases of the Uterus.**

1. Displacements.

Uterine displacements in themselves probably do not give rise to painful menstruation. At least this is true of backward displacements, a statement which can be verified by questioning a series of patients with movable retroverted uteri without adnexal disease. And this is what one would expect, provided there be nothing within the uterus to change the characteristics of the menstrual fluid, so as to make its escape more difficult. The real reason for the dysmenorrhea accompanying backward displacements of the uterus lies in the accompanying inflammation of the endometrium, the tubes, ovaries and the pelvic peritoneum.

There has been much discussion regarding the relation of anterior displacements of the uterus to pain at the menstrual periods. It certainly is interesting to read Marion Sims' book, "Uterine Surgery," and observe the stress which is laid upon anteflexion, anteversion and pin hole os as causes of dysmenorrhea. The uterus is incised in various ways in order to straighten its canal, uterine stems and intra-uterine pessaries are employed with the same object in view, but it is questionable whether the undoubted good results which followed such operative procedures did not arise from the free drainage, which was established for the purulent endometrial discharge, rather than from any aid which straightening the canal may have given to the escape of the menstrual discharge.

My own experience shows me that mere flexion of the uterine body upon itself does not necessarily give rise to any dysmenorrhea. A flexion, plus endometrial inflammation, however, will give rise to menstrual pain, a fact which can be very easily verified. Provided the walls of the cavity of the uterus are not pressed tightly against each other by reason of endometrial inflammation and provided also the fluid character of the menstrual discharge be not changed by the inflamed endometrium, the fluid blood will pass around any flexion without pain. In other words, the dysmenorrhea met with in these displacements is not mechanical, but is due to inflammatory causes.

(2) **Tumors of the Uterus.**

Here the dysmenorrhea may be both mechanical or due to inflammatory causes. A mechanical cause for dysmenorrhea and one often quite baffling as far as diagnosis is concerned, is an uterine polyp situated rather high up in the uterine cavity. The cramp-like pains so frequently observed in these cases at each menstrual period are due to attempts on the part of the uterus to throw off the polyp, which, because of its location, acts as a foreign body. A submucous fibroid is detached and cast out of the uterus by the same mechanism, accompanied by the same cramping pains.

Dysmenorrhea is not an uncommon accompaniment of tumors of the ovaries, both solid and liquid. Here it probably is not mechanical, but is due to the accompanying endometritis.

(3) **Inflammation of the Uterus.**

This is undoubtedly the most common cause of dysmenorrhea, and for the reasons hinted at in speaking of displacements of the uterus. The endometrial mucosa undergoes a variety of changes under the influence of the infective processes. These changes are very liable to lead to hypertrophy of the glandular elements and of the other component parts of the endometrium. The engorgement at the time of the menstrual period leads to an approximation of the walls of the cavity so that what approaches an obstruction may result If now the changes in the infected uterus have so altered the character of the discharge as to deprive it of its fluid quality, then we have the clotted blood acting as a foreign body above the obstruction. The uterus then forces out this body with the cramping pains so common to a certain form of dysmenorrhea. While endometritis with its sequelae will explain most of the cases of dysmenorrhea due to local causes met with in practice, I have been unable to make a satisfactory classification along these lines. For the present at least I do not think we are able to use clinically the elaborate subdivisions of endometritis, which, from the standpoint of microscopic pathology, can easily be made.

The so-called membranous dysmenorrhea is simply an exaggerated form due to the casting off of a whole or parts of the endometrium at each menstrual period. The passage of this membrane through the uterus gives rise to the most excruciating, cramp-like pains. This condition, as shown by microscopic examination of the casts, is distinctly inflammatory in its nature.

(c) **Diseases of the Ovaries.**

Dysmenorrhea may be said to be a very common accompaniment of acute and chronic inflammatory conditions of the ovaries. The pain is apt to come on before the menstrual period and may continue even as long as a week after the occasion of the flow. At times the pain ceases upon the establishment of the period, at other times it seems to be exaggerated by the onset of the flow. Because of these different types of the

dysmenorrhea, while it is undoubtedly due, in some degree at least, to disease of the ovaries, it would seem as if the pain probably arose from the accompanying endometritis.

(d) **Disease of the Tubes.**

The same inflammatory changes are apt to affect both tubes and ovaries, and it is not strange that tubal disease can give rise to dysmenorrhea in certain instances. This is proved by the removal of the diseased tubes and the retention of the ovaries, when the dysmenorrhea will in a large part subside. Still it is rather difficult to explain the relationship between tubal disease and dysmenorrhea and probably it will suffice for our purpose if we merely note that it exists.

Treatment of dysmenorrhea when due to local causes, medicinal and local.

My time only allows a mere outline of such treatment. The organs of elimination, the skin, kidneys and bowels should be kept active. Laxatives, a generous quantity of water to drink, and attention to the skin by warm baths will undoubtedly prove of value. A hot sitz bath when the flow is expected is often very beneficial. Hot water applications, as hot as can be borne, are often grateful to the patient. In the majority of instances the aim should be to start the flow as quickly as possible after the pain begins, with the hope that congestion outside of the uterus will thereby be relieved. One should avoid using opiates or alcohol for the relief of the pain, especially if the patient be susceptible to the relief and pleasure following the use of such drugs. Still, with severe pain, some relief will be insisted upon and must be furnished. In my hands codein has been found more useful than morphine, because it is less constipating and depressing.

Local treatment. So-called local treatment oftentimes will bring great relief to the patient. It is unsatisfactory in that such improvement is apt to be merely temporary. Pelvic inflammation, whether of the uterus, appendages or adjacent peritoneum, often yields to rest in bed, hot water douches and vaginal tampons once or twice a week. Wherever the uterus is freely movable and can be readily restored to its normal position, it can be retained there by a properly fitting pessary. The condition of an inflamed and eroded cervix will greatly improve under puncture of the cysts and systematic application of Churchill's tincture of iodine. Yet it must be admitted that under the treatment outlined above relapses are frequent and the progress of the case is apt to be discouraging to both patient and physician.

Operative treatment. To accomplish the best results such treatment must be thorough. The physician must be competent to recognize disease in any part of the genital tract, for it will avail little if a uterus be curetted and still remain adherent and bound backwards to the rectum. The aim should be to restore the genital tract to as normal a position as possible. This may necessitate a whole series of operations such as dilatation, curettage, trachelorrhaphy, perineorrhaphy, operations upon the diseased appendages and a displaced adherent uterus. Most satisfactory results will usually follow such treatment provided the proper diagnosis has been made. The patient ought to be warned that she must not expect to be entirely free from pain for a number of menstrual periods, that recovery from menstrual difficulties is an extremely slow process, and that the most she can expect from the operation is being placed in a position where it is possible for her to recover in time.

MENORRHAGIA AND METRORRHAGIA*

W. P. MANTON, M. D.,
Detroit

It is a trite old saying that the eye sees only that which it brings with it the power of seeing. Our conception of conditions and things is large in proportion to our knowledge of co-ordinating conditions and things, and we stray in our conclusions just in so far as our intellectual horizon is limited by ignorance of things beyond. The older writers looked upon uterine bleeding as a purely local affair of the uterus, but after the dead-house had yielded up its secrets, and abdominal surgery had thrown a search-light into the fog-obscurity of the unknown, and the microscope had made fine differentiations between natural and morbid phenomena, we began to learn that hemorrhage from the uterus, among other things, might be the result of a larger number of circumstances than our philosophy had previously taken cognizance of. The two words at the head of this paper are only terms representing the results of conditions of wide etiologic variation. They are, to use a rough and homely illustration, only the outcroppings of the ore, which may or may not lead to distant veins.

To understand the significance of increased or prolonged menstruation or of a bloody discharge from the uterus during the intermenstrual gap, one must positively know whether such discharge is the symptom of some nearby disturbance or the manifestation of a remote or general condition. To make a correct diagnosis from uterine blood-sign, therefore, presupposes a good familiarity with general medicine, a knowledge of pelvic pathology, and the ability to analyze the processes intervening between cause and effect. And it is only on the basis of such knowledge that an intelligent and rational treatment can be determined on and carried out. Certain emergencies may demand empirical management, but without a knowledge of the underlying reason this can hardly be dignified by the appellation "treatment"; and while under certain conditions it may be impossible for one to arrive at a positive understanding of the exciting disorder until the microscope has decided the question, we do what we can, but generally with little satisfaction to ourselves and with but slight benefit to the patient. Fortunately those instances in which a diagnosis cannot be made after a little study of the case are rare, and the physician has usually abundant time for investigating the symptoms presented, and to determine the cause of the disorder toward which he must direct his efforts for cure.

As the expression of the presence of a pathological process within the body which may be unimportant or of serious moment, nature throws out this, literally, red flag of warning, and as it is impossible to determine without investigation what morbid state it may predict, a bloody discharge from the uterus should never be disregarded. It is the duty of the physician to find out why the flow is there, and then direct his attention to the cause. Many a woman

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has lost her life because of the physician's indifference and failure to determine that malignancy or other serious disorder and not the "change of life" was responsible for a sanguineous discharge. Nearly twenty years ago I called attention to the importance of a careful physical examination of every woman presenting a bloody discharge from the uterus, and grouped a number of dissimilar cases presenting almost identical symptoms. What was then written is as pertinent today as it was in 1888, and unfortunately there is the same necessity for reiteration.*

The practice of making a general systematic examination of every patient will greatly facilitate in arriving at a knowledge of the condition with which one has to deal, besides obviating the possibility of overlooking some detail of importance which may have great weight and bearing in arriving at a diagnosis. For convenience of diagnosis the examination of the patient should be considered under four heads, and the history of the case, as previously noted, should constantly have these propositions in view. Some such list as the following may be useful for guidance; it contains most, but possibly not all, of the principal conditions which may give rise to uterine bleeding either at the time of menstruation or during the interval between the periods. Uterine hemorrhage may be due to (1), disease of the uterus itself; (2), to disease of near or remote organs or parts; (3), to constitutional disorders; (4), to habits of life, atmospheric conditions, derangements of the nervous system and, more rarely, to psychic influences.

Classifying the conditions just noted, the hemorrhage may result from:

(1) Uterine Causes — Unsuspected pregnancy; threatened abortion; low implantation of the placenta; Metritis; Endometritis; Erosions of the os; Displacements; Polypi; Fibroids; Degeneration of the Uterine blood-vessels; Malignancy.

(2) Diseases of Near and Remote Organs—Adnexal disease (morbid conditions of the ovaries and tubes; of the Broad ligaments; of the Pelvic fascia and vessels); of the Bowel; of the Heart; Lungs; Liver; Kidneys; and of other abdominal viscera.

(3) Constitutional Disorders—Anemia; Plethora; Tuberculosis; Eruptive and other fevers; disorders of the Nervous system (Menopause; shock; fright; psychic disturbances).

(4) Habits of Life—Excessive venery; Indolence (obesity); Gormandizing; Alcoholic excess; Change of Climate (high altitude, sea air, great humidity); Change of occupation.

* Illustrations of Bloody Discharges from the Uterus, and the Importance of Physical Examination in their Differentiation. Phild. Medical News, May 26, 1888.

An inguinal hernia giving signs of obstruction and partially reducible, may empty into a properitoneal sac in Hesselbach's triangle, a loop of gut being compressed against the neck of the sac.

Care must be taken in resecting the last true rib not to open the pleural cavity; for not only does this produce a pneumothorax, but an extensive subcutaneous emphysema may also result.

Ectopic gestation is usually preceded by a period of sterility.

A passage of feces or even of a small amount of gas, after an enema, does not gainsay the presence of intestinal obstruction.

In cases of amenorrhea do not forget the possibility of pregnancy—no matter who the patient is—and avoid the uterine sound.

AMENORRHEA*

RICHARD R. SMITH, M. D.,
Grand Rapids.

By amenorrhea we mean an absence of menstruation occurring between puberty and the menopause—before puberty and after the menopause a woman cannot be said to have amenorrhea. The term implies a pathological state in that this is not the usual one, and apt to be an accompaniment of diseased conditions, either general or local. We recognize also a physiological amenorrhea which takes place during pregnancy and lactation. We must regard the presence of menstruation during pregnancy as being abnormal and as calling for careful investigation and watching. Not so, however, with menstruation occurring during lactation. There has been a very prevalent idea handed down to us from our forefathers and religiously taught in our medical schools and text-books, that menstruation during lactation is not the usual state and that it was to be regarded as distinctly pathological. A more careful investigation of the subject, however, reveals facts which contradict this idea. Möller, in examining 427 nursing women found that in 60 per cent of these menstruation had reappeared. In about one-third of them menstruation had appeared during the first two months after confinement. Mayer, in 625 women that he examined, found a proportion of 57.8 percent menstruating. Heil, in 478 lactation periods found 48.9 percent were accompanied by menstruation. He finds also that the greater the number of pregnancies, the greater the liability to the return of menstruation during lactation. One must then regard the presence of menstruation during lactation as at least as common as its absence, and I believe that as long as it is not attended by undue loss of blood or pain that it cannot be regarded as harmful. We may conclude also that menstruation at this time is not an indication to wean the child, as is sometimes taught, nor is there a liability to an atrophy of the mammary glands after menstruation begins.

Passing on, however, to amenorrhea in the ordinary acceptance of the term, we must regard it as usually abnormal. It hardly seems necessary to state that it is not in itself a disease, but simply a symptom. It may be caused possibly in the individual case by some local trouble, but is usually simply indicative of some constitutional condition. We may conveniently take this up under various headings:

First. Amenorrhea depending upon an occlusion in the cervix, vagina or an imperforate hymen. Although all occlusions are rare, the most common of these is the last named. In the examination of several thousand women, I recall but two causes in which this mechanical form of amenorrhea was present—both were instances of imperforate hymen. Congenital absence of part or all of the vagina, as well as defects of the cervix, are so uncommon as often not to fall within the experience of gynecologists who have seen a large material. Wherever the occlusion may be, the symptoms are about the same.

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The woman gives the history of never having menstruated, and there occur, periodically, attacks of pain. This pain may not, however, be severe. The menstrual blood dilates the genital canal above the obstruction, the blood distending the uterus and even the tubes. Such amenorrhea is purely mechanical and, of course, must be treated by the operation that may be appropriate. In this connection it might be well to utter a word of caution. If the condition has persisted a long time sepsis may follow an operation unless such be done under the strictest precautions as to cleanliness. With imperforate hymen, the operation itself is not of importance, but, nevertheless, the patient must be kept in bed until the organs have assumed their natural size and proportions.

There is no deflection of the uterus, either forward or backward, which can in itself cause an amenorrhea, and an attempt to straighten the canal, with the hope of relieving this condition, usually ends in disappointment.

Second. Another cause for amenorrhea lies in a lack of development of the uterus and ovaries. I wish, however, to lay especial emphasis upon the rarity of this condition, and the still greater rarity of anything pathological about it. It can only be said to be such when it is pronounced and persists far into adult life. We have been too ready to state to patients who have menstruated late or scantily that their trouble is due to a "lack of development." An examination of most cases of amenorrhea in young women will disclose a normal sized uterus, and, as far as the examination can determine, normal ovaries. The normal time for the beginning of menstruation is not by any means a definite one. Because menstruation does not begin at twelve or thirteen, it does not necessarily mean that the condition is a morbid one. Women who are otherwise healthy, but slow in development, often reach the most perfect type of womanhood which we have. Among primitive people maturity takes place early, but these people do not attain the perfection, either physical or mental, which the Caucasian race does. A slow development and a late establishment of the menstrual function may sometimes be regarded as indicative of more perfect development later on.

Third. We now turn to the constitutional causes, and here it must be granted that our knowledge is still imperfect. The absence of menstruation depends upon many influences, some of which are imperfectly understood. It is not uncommon, for instance, that when the normal woman comes to change her mode of living, menstruation ceases for a time. Among nurses coming to the hospital to have their training, it is by no means rare to see an amenorrhea lasting many months. Women coming to the city from the country are oftentimes affected in a similar manner. Changes in climate may also bring this about. Most immigrants present a period in their first year of residence in America when there is a cessation of the menses. Such cannot be said to be distinctly abnormal, for they take place irrespective of nutritional disturbances. Certain occupations are often associated with amenorrhea. It occurs, for instance, in school teachers and others having mental labor indoors.

Fourth. By far the most common cause of amenorrhea is some disturbance in nutrition. Among the well-defined diseases are tuberculosis, typhoid fever, pneumonia—in fact, any of the acute or chronic diseases which cause ill nutrition. Addison's disease and acromegaly should perhaps be mentioned as being rare but positive causes of amenorrhea. So common is amenorrhea associated with tuberculosis that it has led to the popular idea that it is a cause of this disease. As medical men, of course, we

know this to be entirely unfounded, but can readily understand that because of their frequent association a patient may be disturbed in mind when she does not flow. In this connection it might be well to say that in the minds of the laity menstruation assumes an importance which we medical men do not give it. Women commonly believe themselves to be in good health as long as they menstruate regularly, speak with pride of the regularity of their menses as indicating their good health, and are apt to be troubled and alarmed if they cease, are scanty or irregular.

One of the commonest causes of amenorrhea is chlorosis. A large percent of young women during the years of adolescence have periods in which the regularity of the menstrual flow is disturbed or lacking for a more or less prolonged period of time. It is safe to say that most of the cases that come to us for treatment are due to this cause. Any anemia at any period of life is apt to be attended by amenorrhea.

Treatment.—From the above statements it may readily be seen that there is little to be said about the "treatment of amenorrhea," since this is seldom a condition which of itself is of any importance. When caused by obstruction, it should be relieved by appropriate operation as indicated above. Personally, I have no faith in any treatment, electrical or otherwise, which would mean to stimulate to normal growth undeveloped organs, so-called or real. When a woman presents herself with an amenorrhea our first duty should be to find out the cause, and this is usually not a hard thing to do. Knowing as we do the ideas of the laity in regard to the matter, we should instruct the woman first of all as to the true relationship of affairs. This will oftentimes be of much help to her. It hardly seems necessary to emphasize the fact that we should always bear in mind the possibility of pregnancy whenever a woman with amenorrhea presents. A question of morals may arise here. That we so often fail to suspect the true condition of affairs indicates perhaps the confidence we have in womankind rather than our lack of diagnostic acumen. There is probably no one here who has not, for a time at least, been completely thrown off the track for this reason.

When once we have determined the cause, then will arise the question of treatment, and I would again reiterate what I have already said that no case of amenorrhea without a distinct local cause will require operation or local treatments. In fact, I believe much harm can be done in submitting a woman to measures which are not to the purpose. A chlorosis will require appropriate treatment, though it is hardly within the limits of this paper to speak at length upon it. In addition to fresh air, an abundance of food, iron or arsenic, I may say that it has sometimes served my purpose well to remove such girls from school for a year or more. A long rest in bed for a tired and anemic woman will sometimes result in much improvement, and, incidentally, to a reestablishment of the function.

Discussion of Three Preceding Papers.

Dr. Elliott urged a more comprehensive cooperation on the part of the general practitioner and the specialist in these cases of disordered menstruation.

Dr. J. H. Carstens, of Detroit, advocated the education of the laity concerning the seriousness of amenorrhea. In young women there is usually no occasion for worry. Fleshy women in later life often develop an amenorrhea which is difficult to cure. We can never say too much about this everlasting "change of life." Far too many patients go untreated until too late. Dysmenorrhea is a symptom very difficult to deal with. Carstens called attention to the stem pessary as a means of relieving dysmenorrhea and

amenorrhea. The uterus should be dilated and curetted if necessary and the stem pessary inserted to act as a foreign body. Perfectly healthy women, after many years of uterine inactivity, develop pain as a result of fibrous change of the uterine muscle. For these cases Carstens urges a trial of the stem pessary.

Dr. J. N. Bell, of Detroit, recalled the case of a woman 22 years old, in which he made a probable diagnosis of a small cyst of the ovary. She complained of menstrual pain. He dilated and curetted and inserted a stem pessary. One month later the patient had a severe flow. She returned after a year and abdominal section disclosed two small sausage-shaped tubes with atrophic ovaries.

Dr. W. F. Metcalf, of Detroit: Perhaps the most important thought brought out by the symposium was that in every case a thorough physical examination should be made. Often women are labeled neurasthenics and not properly examined. In his own practice he recently had a case in which no diagnosis could be made until examination under ether disclosed small nodules about the ends of the tubes, probably tuberculous. Syphilis may be a cause of uterine hemorrhage, the speaker reporting a case that improved under potassium iodide.

Dr. H. W. Longyear, of Detroit: The subject of dysmenorrhea in young girls is of great importance especially to the general practitioner. Examinations and treatments when there is only a little pain are entirely wrong. An effective remedy is 4 grains of acetanilid and 1-30 grain of strychnine sulphate. Opiates are very rarely indicated. Longyear criticised Carstens' suggestion that any general practitioner can safely use the stem pessary.

Dr. J. E. Davis, of Detroit: A point in reference to the dietaries of these cases: Usually these patients select a large carbo-hydrate diet. The amount of fats and proteids should be increased.

Dr. L. J. Hirschman, of Detroit: More outdoor exercise should be insisted upon for patients with amenorrhea. It should be remembered that a certain number of cases of dysmenorrhea are due to referred pain from rectal disease.

Dr. R. R. Smith could not agree with Carstens in his advocacy of the stem pessary.

Dr. W. P. Manton said that he had had some experience with Dr. Carstens' stem pessary but was glad to say that he no longer used it.

Dr. R. Peterson: Like Drs. Longyear, Smith, and Manton, Peterson said he could not advocate the use of the stem pessary. The long continued wearing of a stem pessary is certainly liable to give rise to sepsis.

Disease of the Gastrointestinal Tract on the Borderland Between Surgery and Internal Medicine.—John C. Hemmeter of Baltimore considers the early diagnosis of cancer of the intestine. It is hardly possible in the latent stage and one of the difficulties of the surgeon is the late stage of the disease at which the patient consults him. A serum diagnosis of such pathological conditions is most desirable. The author gives his experience in differentiating the different forms of tuberculosis peritonitis. There are three valuable aids in diagnosis. The first is intraperitoneal injection of some of the exudate in guinea pigs. The second is the injection of tuberculin. The last is the diazo reaction. This reaction occurring repeatedly indicates a tuberculous condition. The author believes that a cure of tuberculous peritonitis is possible aside from operative interference. His experience leads him to believe that at least as many patients recover under conservative medical treatment as under operation. Peptic ulcer of the duodenum and jejunum following gastroenterostomy for benign stomach diseases is a result of faulty conditions preceding and following operation. The acid chyme of the stomach should pass the orifices of the bile and pancreatic ducts, and the degree of stomach acidity should not exceed two parts to one thousand. Care must be taken to establish a proper course for the food such as nature intended it should take. Otherwise a duodenal ulcer may develop. A purely medical and dietetic treatment should be tried for a long time before operation takes place. —*Medical Record.*

The chief causative factors in peripleuritic abscesses are actinomycosis and typhoid osteomyelitis. A careful history as to a previous typhoid and a thorough microscopic examination of the pus should be secured.

HYGIENE IN PREGNANCY*

W. H. HAUGHEY, M. D.,
Battle Creek.

The process by which a human being is formed and a new soul is born into the world should be, and under normal conditions is, a physiologic one. Practically, however, in modern times, owing to our wide deviation from natural methods, and "the simple life," a very much larger percentage of pathologic cases than formerly is met with.

We cannot ask society, nor even those soon to become mothers, to return to the mode of life enjoyed by primitive man, nor to the environments and practices of our savage ancestors. We can, nevertheless, inject into our present day life those well known principles of hygiene which, if properly followed, would tend to promote health, happiness and longevity; to produce a sturdier and more vigorous race, and greatly improve the conditions of mankind.

Neither space nor time will permit me to dwell upon the evil effects of drug habits, the intemperate use of alcohol and tobacco, nor the vices of immorality and crime. I am consequently limited to a period of nine months occurring at intervals more or less frequent during the reproductive period in the lives of that portion of our women, who choose or consent to become mothers. To this circumscribed span of human life, then, I invite your attention. In it can probably be enumerated about one-fourth of our present adult population, and less than one-fourth of their lives comes within the period covered by the scope of this paper. But what a period! It is the determining period for future generations, as to race, color, health, and enlightenment; for the reproduction of our kind; for the perpetuation of our institutions; and the population of the world.

Just what maternal influences, for good or bad, can be made on the offspring during pregnancy has not yet been determined. But that all determining influences be for good, it is necessary that health and environment be looked after with particular care during this time; that the surroundings be pleasant, freed from everything that causes worry, anxiety, excitement, or shock.

The extra demands made upon the nerve cells to supply the energy necessary to set in motion and keep active these forces and functions required to produce the material that goes into the growth of the new being, are so tremendous as to sometimes exhaust these cells, or to so weaken them as to seriously interfere with their action and the normal discharge of their functions. To this end can be traced much of the neuralgias, reflex vomiting and hysterical seizures of the early stages, eclampsia, and puerperal insanity in the later, or immediately following delivery and the lying-in period.

The confines of this paper, fifteen minutes, admit of so little discussion that I must leave, unsupported by argument, an opinion which, if once entered into, would require many pages for its completion. I cannot refrain, however, from

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a reference at this point, to puerperal insanity which develops so often in patients who up to the time of pregnancy or delivery have always enjoyed perfect health, both mentally and physically, with good family histories, and apparently strong nervous systems. Pregnancy takes place, goes on to term, a normal delivery is followed by normal conditions during the lying-in period. In about a month after delivery friends notice certain peculiar actions, which cause them to again seek medical advice, when a diagnosis of puerperal insanity is quickly and easily made. Is this insanity more apt to be caused by the newly established function of lactation, or by the long-continued demand for more nerve energy during the period of gestation so recently closed? Probably both have their influence, but the simple drying up of the milk, thus terminating the function of lactation, will not effect a cure. Months of rest and quiet, 'mid cheerful and pleasant surroundings, are necessary, a time sufficiently long to allow the overworked cells to recuperate and become, as it were, recharged, must elapse in each individual case before even an approximate return to normal conditions can be secured.

Much time and thought have been given by gynecologists, and valuable work has been done by them in an effort to ascertain what and how much they can do to prevent insanity in women; an equal or greater amount of attention to the same subject on the part of the family physician would yield probably greater results, and the two working together would surely accomplish far more than either unaided by the other can possibly hope to accomplish. I believe the foundation for this trouble is laid long before the gynecologist is called in, viz., during the period of gestation; and that the physician in charge, by keeping ever in mind the danger, especially in primipara, can do much to protect the wonderful and delicate brain mechanism from overstrain and exhaustion during this, its first period of greatest taxation. Wholesome food, out-of-door exercise, pleasant surroundings, freedom from anxious cares, and the harrowing tales of others' sufferings and woes told by well-meaning but ill-advised friends. In a word, exemption from everything that causes an unnecessary consumption of nerve energy, will do much to forestall this dreadful calamity.

That pregnancy causes marked destructive processes to take place in the teeth has long been a recognized fact. Cavities frequently occur and previously existing ones rapidly become larger. In these cavities are found lodging places for particles of food, debris, and germs, and as this mixture is warm and moist, all the conditions for rapid bacterial development are supplied, thus the decay is hastened and extended until nerves are exposed and intense toothache or facial neuralgia is the result. It is a simple and by no means painful operation for a dentist to clean out such cavities and put in good cement fillings, thus supplying firm aseptic dressings for the exposed nerve and checking the bacterial growth and subsequent decay, relieving the ache and the neuralgia in most cases more permanently and less objectionably than can be done by hypodermics of morphine. When an aching tooth cannot be filled with cement, I usually advise its extraction. The pain and shock is soon over and I think is less to be feared than the long continued, nerve-racking torture of toothache or neuralgia, or even the morphine necessary to quiet either for several months of time. Of course, care and judgment must be used when this is done. In well-selected cases that can go calmly about it with little or no excitement I have never seen any bad results from it. A bungling or nervous

dentist should *not* be employed.

Of all the ailments of pregnancy there are none more common or more distressing than vomiting. It is present in nearly every case, is a most annoying condition producing great suffering, and even death has more than once followed in its wake. Here again hygiene can do much in the way of relief. The diet should be carefully watched and intelligently managed; too many restrictions need not be made, but no place should be given to the gratification of the longing for indigestible substances, nor to those of difficult digestion. Ten minutes' intelligent reasoning with the patient will usually secure her co-operation, after which no further trouble in regulating the diet will be found.

Stomach lavage in selected cases gives much relief by cleaning the free mucus and leaving the stomach walls bathed in plain water instead of the fermenting mucoid solution present before lavage. When the stomach tube cannot be used the patient can, immediately after a paroxysm or, better, during it, drink a large glassful of warm water slightly flavored with some agreeable extract or essence, such as peppermint, lemon, pineapple or wintergreen, just sufficient to give it an agreeable taste to the patient. This will probably be at once returned, but the lavage is secured and rest usually follows.

Intestinal fermentation is combatted by keeping the bowels reasonably open and the rectum well cleansed out, thus avoiding much autoinfection from this source. Mild laxatives when necessary, plain or saline enemata, together with a proper diet, and sufficient fresh air and exercise, are the means to be used in most cases, and will usually be found effectual.

In the urine we find an index to many important changes, and it should be studied with care and attention, not only for the presence of albumen, with the evil portent of which all are familiar, but the quantity of urea should be ascertained, and especially frequently during the last few weeks. The quantity of chlorides and sulphates should occasionally be determined and microscopical work should be done. Often the urine is found to be infected, and will then most always yield a small amount of albumen, but it does not come from the kidneys, neither is it an indication or harbinger of convulsions nor eclampsia, but shows some mild cystitis, and should be treated by systemic medication, bladder irrigations, or both.

The Cervix: Old lacerations, gonorrheal or other discharges, should receive prompt attention. In the very early stages lacerations may be repaired. Though I do not recommend this to others, I have done it myself as late as the third month with excellent results, and no unfavorable symptoms followed. Ulcerations should be cleansed, treated with iodine and healed. Gonorrhea should receive its proper attention. In fact, place the patient in as nearly normal condition as possible and keep her there.

I am not a believer in massage to nipples or breasts with the idea of increasing their size and function, nor of stimulating the flow of milk; neither do I favor too much dieting for this purpose, nor for the purpose of effecting an easy delivery. I prefer to take care of the general condition of the patient, and trust nature to do her part.

Happy indeed is that young mother who passes through her first pregnancy and brings forth a healthy child with no serious effects on herself or her offspring. Correspondingly unhappy is she who is able to trace to some act or neglect of her own a physical or mental defect in her child. A woman pregnant for the first time is the target against which is launched all the advice, caution, or censure that can be conjured up in the fer-

tile brains of all the women of her acquaintance who, having born children, believe themselves by means of this experience competent to advise or warn. And many young women would be better off in the wilds of the unbroken forest, whose denizens she might indeed copy, but whose advice and warnings she could not understand, than surrounded by these well-meaning but misguided, though terribly enthusiastic, friends.

As professional men and women it is our duty to caution near relatives and those closely associated with the patient to protect her as much as possible from her friends. She should have the early and frequent advice of a conservative physician who has been made acquainted with all the conditions surrounding her past, including family peculiarities, personal history and habits, and constitutional traits and characteristics. Then by closely watching the patient and following the principles of hygiene suggested above, a successful and happy termination will be the rule.

If a patient complains of sharp pain in the big toe, examine the urine for albumin or sugar in order to exclude a diabetic or nephritic condition.

Always examine a chld sufferng from chorea for the presence of adenoids. The removal of the growths in the back of the pharynx may cure a mild case.

Increasing deafness and blindness should suggest an intracranial tumor, especially if facial palsy be present. The commonest situation is in the cerebello-pontine angle.

Persistent hemorrhage after the extraction of a tooth is often relieved by the application of trichloracetic acid. If the hemorrhage does not cease after its application, tamponade of the cavity is the next best available means of stopping the flow of blood.

On Flatulence and its Treatment.—Max Einhorn of New York says that flatulence may be associated with the stomach alone, or with the intestine. When primary it is not caused by fermentation, but by swallowing of air. The sphincter muscles of the digestive canal are principally affected. It may exist for a long time without serious consequences. In acute and chronic gastric catarrh there is a real increase in the amount of gas in the stomach and a lessened absorption of it. Flatulence can be lessened by distracting the attention of the patient from his own sensations. When it is secondary it results from cardiac, circulatory, or respiratory diseases, and the relief by belching is rather imaginary than real. In primary flatulence, treatment consists in the effort not to belch, with a simple diet and avoidance of beverages and foods that produce gas.—*Medical Record,* September 14, 1907.

"If a man can write a better book, preach a better sermon, or make a better mouse-trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—*Ralph Waldo Emerson.*

A moderate prolapse of the rectum with hemorrhoids may possibly be relieved by the treatment of the hemorrhoids with clamp and cautery.

A sinus leading high up in the axilla and discharging a moderately clear fluid may communicate with the shoulder joint or pleura.

A high temperature just after or during an abortion is evdence of intrauterine manipulation, especially if the discharge from the uterus is fetid.

A fecal fistula may be made to heal more quickly by the application of the actual cautery.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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JANUARY

Editorial

The Archives of Internal Medicine.—The announcement has been made of a new journal to appear under the above title. It is to be devoted to internal medicine, will contain no abstracts or editorials and will carry no advertisements. It will appear monthly, making two volumes a year. The subscription price is $4.00, or to members of the American Medical Association or subscribers to the Journal of the Association it will be $3.00.

Such an announcement is certain to arouse misgivings. The addition of a new journal to the already extensive list of medical periodicals must be viewed with suspicion and criticism, and yet such a thing is merely one of the signs of the times. Medical periodicals are rapidly increasing, not only those of a general tendency, but also those devoted to special subjects. The fact depends upon the character of contemporary medical activity. An enormous amount of new material is constantly being written. This is not adapted to publication in books; nothing but periodicals of a serious kind can fill the need of conveying the written article to the reader. However, the multiplication of solid medical journals has a serious economic importance and the latter must be squarely faced if the existence of such journals is to continue and their purpose to succeed. But few physicians can subscribe for the many journals they should read. *Noblesse oblige,* and the well-to-do physician can repay his debt to the profession by subscribing liberally. For others the solution must be in the medical library, which must exist in every town large enough to support progressive physicians. But it may be said that even if libraries are greatly multiplied the circulation of journals would be small and their publication unprofitable. It is precisely in this respect that The Archives of Internal Medicine occupies an important vantage point. It is published by a large and strong organization, the American Medical Association, which owns its own printing plant and has all the other animate and inanimate means for the production of printed matter. The publication is not intended to be a source of financial profit, and the money received from subscribers will be devoted to keeping up and improving the workmanship of the journal.

At first glance it may be thought that the journals now in existence provide all the room necessary for medical literature. On the other hand, the advance in medical education and medical study in America has been accompanied with a great increase in the number of those qualified to make contributions to medical knowledge; while at the same time the field of investigation is enormously enlarged. The field to be covered by The Archives of Internal Medicine is different from that of any journal now printed in the United States. "The American Journal of the Medical Sciences," one of the best medical periodicals ever published, covers the whole realm of medicine. The "Journal of Experimental Medicine," the "Journal of Medical Research" and the "Journal of Infectious Diseases" offer facilities for purely technical papers in the more scientific part of medicine. The Archives

of Internal Medicine, as its name signifies, will be open to articles that appeal more strongly to the practical side, though it is to be hoped that its articles will never be free from sound scientific foundation. Many excellent articles have failed of their purpose because they were published in journals where they would not be looked for or cut up into parts and issued in journals that could not afford space for a long article. The Archives will serve to show that internal medicine is just as important a field of investigation as any other. The remarkable discoveries of the last quarter century have over-emphasized the importance of experimental investigations. Men with proper training can still make clinical observations quite as important as those made before the experimental days by Morgagni, Corvisart, Bright, Addison. Skoda and so many others. The whole field of functional alteration in sick people is open to explorers. The real value of pharmacology in the sick man is still to be worked up in detail. No amount of official or institutional research will absolve the clinician from the duty of confirming discoveries of clinical importance. More than ever before the clinician must remain master in his own house, and it is to be hoped that The Archives of Internal Medicine will assist him to do this with accuracy and therefore with success.

The absence of abstracts and editorials will strike many readers as a novel departure. On consideration, however, there will seem to be no serious loss from this peculiarity. Selected abstracts will doubtless continue to appear in many periodicals. The abstracting of all the articles in a series of journals, so successfully carried out by the Journal of the American Medical Association, can be kept up better by that Journal, it would seem, than by any other. On the other hand, we are promised that critical reviews of articles on important subjects will from time to time appear in The Archives. Those who have occasion to go over all the literature of a given subject for a number of years could often make such reviews while writing original articles and could have the reviews published separately to the great advantage of their readers and as a great improvement over the bibliographic lists to which many writers are now limited. Those who are familiar with the comprehensive reviews in the Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie must have deplored the absence of similar articles in English literature.

From the above one may see the many possibilities of a new journal. The appearance and reception of The Archives of Internal Medicine must therefore be followed with interest by every one who is concerned with the literature of medicine.

* * *

A comparatively scientific medical nomenclature is now taught in the best medical schools of the country,—as scientific as the profession has allowed it to become. It is of great advantage to have diseases, symptoms, etc., called by appropriate names, and it is conducive to the universality of medical terminology if Latin names are used. In this respect the modern student is well taught, but his instructors sometimes forget to identify the scientific with the popular or old-fashioned names, and when the student begins his real practice he is confronted by terms that he is likely never to have heard. The laity are quite tenacious of such terms as "brain fever," "congestive chill," "softening of the brain," "slow fever," "inflammation of the bowels," and not a few physicians are equally tenacious. One suspects that these phrases are used as a cloak for ignorance in some

instances; for example, how intelligent it sounds to speak of "inflammation of the bowels," yet what a multitude of diagnoses may be enshrouded in its ample folds. And how many can swear to the identity of a "congestive chill?" "Slow fever" is the dictum of the physician who is unable or too lazy to diagnose between typhoid, tuberculosis, or sepsis.

Other names, while more connotative, and closely defined, yet often escape the average student, and he is in the realm of speculation when he hears, as he may in different parts, of "prison fever," "break-bone fever," "black death," "icing liver," "wooden tongue," "trembles," etc. He may well wonder at such hack phrases, and think scornfully of the users; but he should remember that exactly similar phrases have been dignified into such common usage that they have long since lost their flavor of vernacular, for example, "consumption," "ague-cake," "nutmeg-liver," "whooping cough," "small-pox," and many others.

It would be an interesting study to collect and classify such terms and seek their origin. Some of them are so fitting that they will, perhaps, never be relinquished; others are so ingrained in us that we cease to think of their inappropriateness; but the majority are unnecessary, unscientific, misnomers, and it would greatly help a good cause if physicians would forsake their use. Efforts in this direction have already taught the public largely that "lockjaw" is tetanus, that "putrid sore throat" is diphtheria, that "lung fever" is pneumonia, that "hunch-back," "hip disease," "scrofula" and "consumption" are tuberculous diseases. That these things are being learned is due to the latter-day belief in sharing knowledge with the laity, instead of mystifying them by silence and secrecy.

In the meantime, undesirable as these popular, old-fashioned, or colloquial names may be, it is wise to retain at least a knowledge of their definition, so that we shall not seem ignorant when asked about "gastric fever," "water on the brain," "canker sore," "English sweats," or "black death."

* * *

How Some Nostrums are Exploited.—Ever since the Council of Pharmacy has been passing upon the virtues of many of our "new and non-official" remedies, the vendors of patented, synthetic, and specially prepared products have awaited with much anxiety the seal of approbation for their pet preparations. They have been loathe to advertise in legitimate medical journals until "accepted"; they have cautiously avoided exploitation in lay periodicals; but they have been none the less active in placing their products before the profession by other methods of advertising.

The very latest that has come to our attention is a scheme that, with its attractive and simple plan, rivals the astuteness of the cross-roads barker. A large eastern importing firm is eager to increase its sale of remedies—a very laudable ambition. The agent tells you that the laity "cry for" these products, but the firm abhors the suggestions of public advertisement to increase the sale. They have spent fortunes annually in honest medical advertising and could continue to with profit. But why should they give these sums of money yearly to medical periodicals when the profession might as well divide the plum? Their plan is this: The company has placed on sale a large block of preferred stock. (How enticing this word stock is to the struggling practitioner!) Only a limited number of shares is procurable by each physician at par value. He pays 10 per cent down on the subscription and 10 per cent monthly until all is paid for. Mean-

while he is assured of a two per cent quarterly dividend with an annual common dividend amounting to 10 per cent.

What are his duties as a subscriber and shareholder? None, absolutely none!

He is assured that it is perfectly ethical — no question about it. The names of prominent physicians are mentioned and his skepticism vanishes as his eagerness to enjoy the income on a safe investment grows.

At this moment (if the agent does not press his scheme too quickly) he is inclined to ask himself a few questions. Who will buy the products of this concern? Will he prescribe them for his patients if he never has before, or in preference to remedies that he is sure of? Has he the right to become the agent or the advertising medium of a business corporation in his practice of medicine? Would his action pass a "council of ethics?"

At that moment too, he wonders if these prominent physicians really bought stock in such a concern? If they did, were their motives ethical?

There can be but one standpoint for a physician to take on such a proposition: to brand it as absolutely unprofessional. The man who trifles with the welfare of his patient for the purpose of selling the products of a company in which his money is invested, is on a lower plane than the practitioner who takes a rake-off from the prescriptions he sends to his druggist. He is a masquerading buzzard, and there is no scorn nor condemnation severe enough to put him on the rack with those charlatans who make their livelihood on secret nostrums.

It is hoped that none of the Michigan profession has been seduced by this or other similar schemes. We regret to say that there are some medical men of recognized standing in our societies today who hold shares in pharmaceutical companies and who demand in their prescriptions the dispensing of the drugs of their own form "in original bottle with label removed," et cetera. Fortunately the special products that they prescribe are often inert or valueless and do no harm to the confiding patient. Their methods will doubtless lead them to grief in the end and should they at some time receive their deserved opprobrium, surely ethical practitioners will have no sympathy to waste upon them.

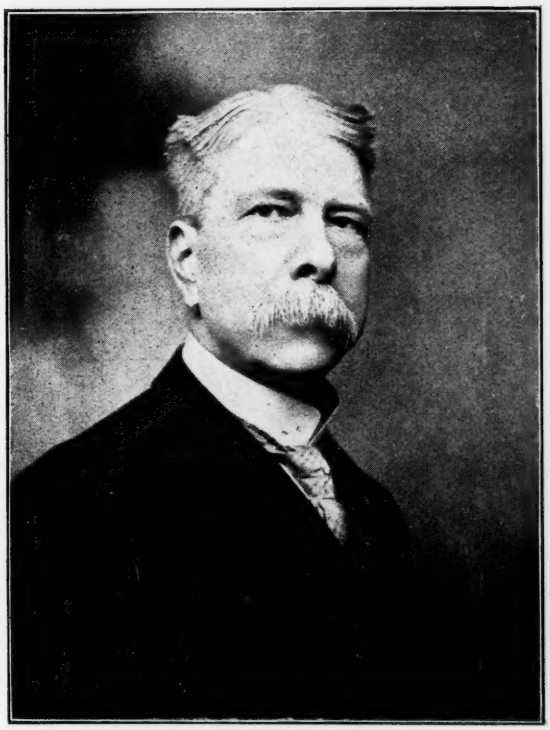
Obituary

DR. SIDNEY I. SMALL.

1842-1907.

If anyone familiar with the affairs and the personnel of the Michigan State Medical Society were asked to enumerate those of its membership who have deserved and enjoyed the esteem of their colleagues, universally, the name of Dr. Sidney I. Small would surely not fail of early mention. It is scarcely possible for one who has known him intimately to conceive of his giving abiding place to any petty failings. He brought to every act of life calm judgment, benevolence, sincerity, and old-fashioned integrity. His mental poise was excellent: he had in marked degree the judicial temperament and was invariably actuated by lofty motives.

The one who is privileged to write these laudatory words has known him for nearly thirty years, and as acquaintance ripened it was more and more highly prized. Eventually there developed an abiding affection which has been steadily augmented with longer acquaintance. I have met Dr. Small under trying conditions. It has been my good fortune to receive from him and to give to



Sidney T. Small, M. D.

1842 - 1907

him such as was within the power of either. At the bedside he was a safe, conscientious and sympathetic adviser. He had an eye single to the needs of his patients and brought to bear in difficult cases much careful thought on his own part and the results of the experience of others. He was pre-eminently unselfish and fair and spared no amount of personal sacrifice to a worthy end. Socially his manners were delightful. There was a fund of drollery and that fine response to the amusing episodes of life highly suggestive of a heartful of kindness and of abounding good nature.

He brought to the Council of the State Medical Society the same caution, the same considerateness, the same frankness and the same self-effacing fairness that governed him in his relations with his patients and with his professional brethren. He measured every important act by the moral standard. He gave, without stint, of his time to the affairs of the society during the early and trying period of reorganization. It is doubtful if one could have anywhere been found better fitted to unite elements at first more or less dissident and inharmonious. His plain, fatherly, conciliatory ways, and the fact that he was so strongly believed in by members of his profession, permitted the speedy progress of the societies in the Eighth Councilor District to an influential position in the reorganized association. This position has been maintained. The early seed was discreetly sown. For the harmonious and comfortable relation of members of the profession in the Saginaw Valley and nearby counties to each other, and the prosperity of these societies, much is owing to our lamented friend.

Dr. Small was the son of the late Alexander and Elizabeth Blaisdell Small, and was born in Carmel, Maine, April 24, 1842. He received his preliminary education in the public schools of Carmel and the Hampton Academy. He was graduated from the Maine Medical College in 1872 and from the College of Physicians and Surgeons, New York, in 1873. For a year he practiced medicine in Maine. In 1874 he moved to Saginaw, where, in the language of a eulogist, he "built with the passing years an enviable reputation and practice." For twenty-five years he was connected with St. Mary's Hospital, and was a member of the staff of the Saginaw General Hospital. He served on the Council of the Michigan State Medical Society from 1902 to 1907.

He was a member of the Masonic order, was interested in civic affairs but never sought public office. "He was an unobtrustive citizen doing the work that lay in his path of duty with a native modesty that sought no glare." "He was an energetic worker and had a profound love for good literature."

He was married in 1878 to Miss Meriba Ruggles, of Carmel, Maine. Two children were born of this union, a daughter and a son, whose lives have given evidence of the value of the best parental influences. In his home life, Dr. Small was delightful, an ideal husband and father. He was self-sacrificing and kind and was revered by the members of a charming family circle.

Death came with great suddenness as the result of an apoplectic seizure, Saturday evening, November 23. He had been in failing health for two years before, but resolutely carried on his work up to the time of the final summons.

His fervent hand-clasp, his radiant smile, his cordial greeting will long be remembered by his professional brethren.

The record of his life is a beacon light. Though "the golden bowl be broken," its contents have been poured out abundantly and graciously upon others, leaving with them the fragrant memory of a life beautiful in its simplicity, emulating that of One who "went about doing good."

C. B. B.

JABEZ PERKINS, M.D.

1820-1907.

Jabez Perkins was born in Defiance, Ohio, October 26, 1820. At the age of 18, he entered Wesleyan University, and after two years study there, he began the study of medicine and entered the Western Reserve University, Cleveland, graduating in 1849. In 1859, he took a post-graduate course in the College of Physicians and Surgeons, New York. He settled in Owosso in 1860. Two years later he entered the service of his country, and had charge of a hospital at Nashville; later he received a commission with the Tenth Kentucky Volunteer Infantry; later still, he was Chief Surgeon of the Twentieth Army Corps of the Army of the Cumberland.

On October 6, 1865, he resigned and was brevetted Lieutenant Colonel for gallant and meritorious services to his Country. After the war he took another post-graduate course at the College of Physicians and Surgeons, and then returned to Owosso, which has been his home and the field of his labors till the day of his death, which occurred Wednesday morning, November 6, 1907.

Dr. Perkins was a constant student, an able diagnostician, and a careful, conscientious practitioner,—a physician of rare good judgment. He was a doctor of the "Weelum McClure" type, ministering with his best skill to the rich and poor alike, going night and day, through wind and storm, without thought of self or compensation. He was kind, sympathetic and charitable. "He had a tear of pity and a hand open as day for meeting charity."

He believed in medical organization for its social and educational influences, and was a member of the County, State and American Medical Societies.

The County Society attended his funeral in a body and gently laid him down in "God's Acre," "breathing a benison o'er the sleeping dust."

The following resolutions were passed:

Whereas, death has removed from our midst, in the fullness of years, our beloved friend and associate, Dr. Jabez Perkins; and, whereas, he was a wise counsellor and valued advisor to the members of this Society for many years; therefore, be it

Resolved, By the Shiawassee County Medical Society, that in this memorial and resolutions we express our loss and sorrow, at the severance of those ties of many years' duration, and that we express to the widow our deepest sympathy in her bereavement.

Resolved, That this memorial and resolution be spread upon the record, a copy be sent to the JOURNAL for publication and a copy be forwarded to the widow of our deceased member.

C. MCCORMICK,
A. L. ARNOLD,
R. C. MAHANEY,
Committee.

Book Notices

Obstetrics:—A Text Book for Students and Practitioners.—By J. Whitridge Williams, Professor of Obstetrics in Johns Hopkins University. Second Edition. Octavo: 950 pages, 166 illustrations and 16 plates; cloth, $5.00. New York; D. Appleton & Co.; 1907.

When the first edition of Williams' Obstetrics appeared, four years ago, it was instantly accepted as one of the three best American treatises on the subject. The author's well known scientific ability, coupled with his excellent literary attainments, produced a book which has no superior. An edition of 17,500 was printed and sold. As it became exhausted, a second edition was prepared and this second edition has been brought up to date by a complete recast of the chapters on the "Development of the Ovum" and the "Toxemias of Pregnancy." New matter relative to the "Meta-

bolism of Normal Pregnancy,' "Vaginal Cesarean Section," "Pubiotomy" and "Contractions of the Pelvis Outlet" have been added.

The arrangement of the matter in each chapter is logical. The historical references are always interesting and to the point. While the views of others are given full weight, one is never at a loss to know what the author thinks of a theoretical question or what he does under certain conditions. It is the individuality about the book which gives it its greatest value.

The illustrations are all original. They are well chosen and splendidly executed.

The book is to be unreservedly recommended.

Heart Disease and Blood Pressure. By Louis F. Bishop, A. M., M .D. Second Edition; pp. 120. Cloth, $1.00. New York; E. B. Treat & Co.; 1907.

With the avowed intention of expounding a pet theory rather than adding some scientific facts or data to our knowledge of blood pressure changes, Doctor Bishop has published his second edition on "Heart Disease and Blood Pressure."

Under this title the unsuspecting physician looks for a book that will enlighten him on the important subject of vascular tension, but how the author can pretend to give or the reader expect to get an intelligent exposition of "Heart Disease and Blood Pressure" in 113 pages baffles comprehension.

The author presupposes too much when he states that the impression gained "by one's early study of physiology is erroneous." Doubtless some physicians have incorrect ideas (or maybe none at all) on the physiology of the circulation: to them any new idea adds to the confusion, especially the dominant one in this book. The many careful readers of the profession, however, will disagree with the conception the author has of Harvey's work on the circulation, as they will also refuse to accept entirely the analogue of the tubular boiler to the arterial system.

In Chapter II., page 24, we are met with a statement that at once elevates one's own systolic pressure. The writer says: "The symptoms are practically the same for all forms of valvular lesions, although different in degree. Indeed, it is more often an academic than a practical question to decide which valves are at fault." Does a clinical professor in Diseases of the Heart imply that he teaches his students to treat incompensated mital insufficiency and aortic stenosis in the same manner?

In Chapter III., page 29, the author recommends the use of sodium iodid during the stage of cardiac compensation to prevent "degeneration of the hypertrophied heart." On page 43, he says that alcohol in moderation may be employed with therapeutic benefit in patients whose kidneys are damaged by disease. On page 57 we read: "There is a class of obscure symptoms of ciculatory disorder which consists of pain in various parts of the body. How much of this is purely circulatory, and how much of it belongs to the gouty, rheumatic, and nutritional disorders that are common in the same class of patients, is often hard to determine." When publishers accept such manuscript, when authors foist such ideas on the profession, and when practitioners are enticed into reading these and similar statements, we often wonder if there should not be a censor of medical publications.

Towards the end of the book Doctor Bishop quotes himself, as well as the opinion different writers have of his work in a satisfying fashion.

There is nothing new in this well published little book. It is useless and even harmful to the doctor who wants to gain an intelligent idea on this subject. It is worthless to any physician doing advanced work on blood pressure.

A Manual of Hygiene and Sanitation. By Seneca Egbert, M. D., Professor of Hygiene in the Medico-Chirurgical College, Philadelphia. New (fourth) Edition, thoroughly revised. 12 mo., 498 pages, with 93 illustrations. Cloth, $2.25 net. Lea Brothers & Co., Philadelphia and New York; 1907.

This work of Egbert's admirably fills the place of a moderate sized book on hygiene. This science has developed so remarkably in the last decade that its literature has now become very large, but Egbert has revised his work without adding greatly to its original size. He has confined the subjects treated to those most generally useful to the medical man, and the result is that the volume is especially readable. There is not a dull page in it. Moreover there is contained in it much information which every practitioner ought to have, though it is safe to say that few are conversant with many of the points brought out, as for example, in the chapters on "Ventilation and Heating" and "School Hygiene." These chapters and those on "Water," "Food," and "Personal Hygiene" are particularly valuable.

No one can read the book without gaining many valuable hints. The text is elucidated by good illustrations.

Handbook of Cutaneous Therapeutics. By W. A. Hardaway, A. M., M. D., Professor of Diseases of the Skin and Syphilis in Washington University, St. Louis, Mo., and Joseph Grindon, M. D., Ph. B., Professor of Clinical Dermatology and Syphilis in Washington University, St. Louis, Mo., 12 mo., 606 pages. Cloth, $2.75 net. Philadelphia, Lea Brothers & Co.; 1907.

This handbook consisting of 606 pages, is divided into two parts: The Treatment of Diseases of the Skin, and General Treatment and Methods.

Part 1 consists of brief, concise, descriptions of the various diseases and their medical treatment, and is the result of Dr. Hardaway's long experience. He has interspersed carefully selected formulae.

Part 2, written by Dr. Grindon, takes up physical and mechanical treatment of these diseases, including Radiotherapy, Faradism, Galvanism, High-Frequency, and Minor Surgery.

While each has written on his own topics, in the two parts, their co-operation on the whole work, gives a completeness which is most useful and instructive.

The importance of obtaining carefully prepared local applications, especially ointments, has been fully realized by the authors, and they have contributed some useful notes on the preparation of ointments, etc., from an experienced professor of pharmacy, J. M. Good.

The work is intended to supply to the general physician, a ready aid in the diagnoses and therapeutics of the diseases of the skin.

A Manual of the Practice of Medicine. By A. A. Stevens, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth Edition, Revised. 12 mo. of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, $2.50 net.

The eighth edition of this popular manual seems to have been carefully revised and brought up to date. A book of this kind can hardly be of great use to any one but the student cramming for examinations, but the demand for similar compends shows that they have a legitimate place and of its kind the volume before us is certainly one of the best. The field is very thoroughly covered, and the statements are on the whole clear and accurate. The sections on general symptomatology and methods of examination are unusually good for such a manual. In addition to the subjects usually treated in books on practice, there is a very complete chapter on the diseases of the skin and its appendages.

The Physician's Visiting List. For 25 patients per week, $1.00; 50 patients, $1.50, or in 2 vols., $2.00. Philadelphia, P. Blakiston's Son & Co.; 1908.

This well known visiting list has appeared for the fifty-seventh time. It is well printed and bound and the arrangement is most convenient.

County Society News

Second District.

The counties comprising the Second Councilor District (Hillsdale, Ingham and Jackson) met with the Jackson Society on December 5, 1907.

Dr. M. C. Strong, retiring president, was chosen temporary chairman, and Dr. H. H. Frazier, of Hillsdale, temporary secretary. A motion that the chairman appoint a committee on permanent organization was seconded and carried. The committee appointed was Dr. B. F. Green, Hillsdale; Dr. C. G. Parnall, Jackson; Dr. F. L. Seger, Leslie.

The following was the program for the afternoon: Address of Welcome, Dr. A. E. Bulson, Councilor Second District; "Preventive Medicine. Is It a Fact, a Fad or a Fancy?" Dr. F. W. Shumway, Secretary State Board of Health; "Loss of Originality in Prescription Writing," Dr. Bion Whelan, Hillsdale; "Opsonins," Dr. W. H. Hutchins, Detroit; "Spina-Bifida," with Special Reference to Treatment," Dr. Miles F. Porter, Fort Wayne, Ind.; "Medical Record Keeping," Dr. Samuel Osborne, Lansing; "Renal Tuberculosis, a Surgical Disease," Dr. F. W. Robbins, Detroit, Mich.; "The More Recent Pathology of Gonorrhea," demonstration by lantern slides, Dr. A. S. Warthin, University of Michigan.

All the papers were given, except that on medical record keeping, Dr. Osborne not being present. The committee on permanent organization reported and the Second Councilor District Medical Society was organized, a constitution adopted, and the following officers elected: President, Dr.

N. H. Williams, Jackson; vice-president, Dr. B. F. Green, Hillsdale; secretary and treasurer, Dr. Samuel Osborn, Lansing.

In the evening Jackson County Medical Society's annual banquet was held at the Otsego. Sixty were present. At the tables as guests of the society, there were present Dr. Herman Ostrander, of Kalamazoo; President of the State Society; Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. A. S. Warthin, University of Michigan; Dr. F. W. Robbins, Detroit.

R. GRACE HENDRICK, *Sec'y.*

Calhoun.

The thirty-first annual meeting of the Calhoun County Medical Society was held at the Y. M. C. A. rooms in Battle Creek Tuesday, December 3, 1907.

More than one hundred members and neghboring physicians were present and the meeting was adjudged the best of years. The year just finished has been the most profitable in the history of the society. The membership has advanced from seventy-eight to eighty-one, notwithstanding the loss of seven by resignation and removal.

A post graduate branch of the society has been formed as the Battle Creek Medical Club, to which only society members are eligible, with a membership roll of about forty. Weekly meetings are held and one paper a week read and thoroughly discussed. From twenty-five to thirty attend regularly.

In the County Society work a marked increase in enthusiasm has been apparent all the year, both in the attendance and discussion of papers.

At the annual meeting the full program was rendered, the only drawback being the shortness of time owing to the delay of starting the meeting.

The first paper was by Dr. Frank X. Walker, of Chicago, "Metabolic Intoxication in Infancy." It was full of new ideas and suggestions as to the treatment of a more or less greatly neglected and overlooked condition in children. It was ably delivered, clearly illustrated and well discussed.

Dr. Bayard Holmes, also of Chicago, followed with a paper of an allied subject, "Symptomatic Toxemia from Local Infection." It was full of the results of practical work upon the part of Babcock and Holmes and brought forth some valuable and startling results. Like the previous paper it provoked a vigorous discussion.

The scientific part of the program was ably closed by Dr. Albert P. Ohlmacher, of Detroit, who outlined the results of his extensive work with the opsonins in a paper entitled "The Theory of Opsonins as Applied in Practice." It took up in a broad and practical manner the treatment and analysis of a great variety of diseases according to the theory advanced by Wright.

A committee of three, of which Dr. Geo. C. Hafford, of Albion, is chairman, was appointed to confer with the supervisors in the hope of arranging some plan whereby the indigent and county poor may be cared for and the fees, necessarily of small amounts be paid into the society treasury as a part of its maintenance and so eventually obviate the necessity of a per capita tax.

The annual election of officers resulted in the choice of Dr. W. H. Riley, of Battle Creek, for president; Dr. Geo. B. Gesner, of Marshall, for vice-president; Dr. A. S. Kimball, of Battle Creek, for secretary-treasurer; Dr. R. M. Gubbins, of Ceresco, and Dr. S. K. Knight, of Marshall, for delegates; and Dr. R. D. Sleight, of Battle Creek, and Dr. J. L. Ramsdell, of Albion, alternates.

The meeting adjourned to the Post Tavern to the banquet at which were seated one hundred and twenty guests.

The next meeting will be held March 3, 1908, in Albion.

A. S. KIMBALL, *Sec'y.*

Jackson.

The Jackson County Medical Society held its annual meeting December 5, 1907, before the meeting of the Second Councilor District.

The business meeting at ten a. m. was well attended, and the various annual reports and committee reports showed thorough work along lines pertaining to the public health and in post graduate work.

Officers for the coming year were elected as follows: President, Dr. F. W. Rogers, Jackson; vice-president, Dr. G. H. Townsend, Tompkins; secretary, Dr. R. Grace Hendrick, Jackson; treasurer, Dr. A. J. Roberts, Jackson; delegate, Dr. M. C. Strong, Jackson; alternate delegate, Dr. J. C. Kugler, Jackson.

R. GRACE HENDRICK, *Sec'y.*

Kent.

The Kent County Medical Society held its annual meeting in the Board of Trade rooms in Grand Rapids, Dec. 11th, 1907.

Reports from all the retiring officers were very encouraging and indicated that the society has closed the most successful year of its existence. Thirty-two scientific papers were read and 48 clinical cases exhibited. Socially we have had a banquet, a smoker and a picnic. The average attendance at our meetings was 26—although there were occasions when the attendance was between 60 and 70.

The following officers were elected for the ensuing year: President, Dr. G. L. McBride, Grand Rapids; vice-president, Dr. W. H. Kassabian, Coopersville; secretary, Dr. F. C. Warnshuis, Grand Rapids; treasurer, Dr. J. J. Rooks, Grand Rapids; delegates, Drs. R. W. Luce and L. E. Chappelle; alternates, Drs. J. E. Meengs and Ralph Apted.

The newly elected officers enter upon their duties with the determination of making this coming year more successful than the last.

F. C. WARNSHUIS, *Sec'y.*

Lenawee.

The third annual meeting and banquet of the Lenawee County Medical Society was held in Foresters' hall, Adrian, December 10, 1907. Over sixty members were present from all over the county, and there were several visitors from other places, who expressed themselves as highly pleased with the excellent work of the society.

Promptly at 3 o'clock in the afternoon the members gathered at Foresters' hall, where the annual election of officers was held and the reports for the past year read and approved. President Dr. D. L. Treat was absent, and Vice-President Dr. O. N. Rice occupied the chair. The following were elected to fill the offices during the year of 1908: President, Dr. O. N. Rice, of Tipton; vice-president, Dr. L. G. North, of Tecumseh; secretary-treasurer, Dr. J. C. Johnson, of Adrian; delegate to state meeting, Dr. R. M. Eccles, of Blissfield; alternate, Dr. I. L. Spaulding.

Dr. Johnson, the present secretary and treasurer, read the reports of these officers for the season just completed. They showed that both financially and otherwise the society is in the best of condition. The membership has been raised far above the half century mark.

At the outset the meetings of the society were held every three months, then a change was made, and they were held every two months. By action of Tuesday's meeting it was decided to convene once every four weeks.

Dr. John Kellar, of Toledo, was present and read a very interesting paper.

This ended the session of the afternoon and the meeting was adjourned to convene at the hall for the banquet at 6 o'clock. The dinner, at which 62 members and their wives sat down, proved a most enjoyable affair.

J. C. JOHNSON, *Sec'y.*

Mecosta.

At the annual meeting of the Mecosta County Medical Society the following officers were elected for the ensuing year: President, F. C. Terrill, Big Rapids; first vice-president, James B. Campbell, Stanwood; second vice-president, W. A. Kuhn, White Cloud; secretary-treasurer, G. H. Lynch, Big Rapids; delegate to State Society, Joseph McNeese, Morley; alternate, Gordon McAllister, Stanwood.

Important business affairs were discussed. It was decided to extend an invitation to the District Society to hold their next annual meeting in Big Rapids as the guests of the local society. Commitees were appointed and plans and outlines made for the post-graduate work for the coming year.

G. H. LYNCH, *Sec'y.*

O. M., C. O., R. O.

At the annual meeting of the O. M., C. O., R. O. Medical Society, held at Gaylord on December 18, 1907, the following officers were elected for the ensuing year: President, Dr. A. J. Pettis, of West Branch; vice-president, Dr. W. G. Young, of Gaylord; secretary-treasurer, Dr. Archie C. MacKinnon, of Lewiston; delegate to state meeting, Dr. L. A. Harris, of Gaylord; alternate delegate, Dr. E. L. Forde, of Gaylord.

The advisability of holding the meetings bimonthly was discussed but no action taken at this meeting.

The next meeting will be held at West Branch, February 19th, 1908.

ARCHIE MACKINNON, *Sec'y.*

Shiawassee.

The regular monthly meeting of the Shiawassee County Medical Society occurred Tuesday December 3, 2:30 p. m., in the city of Owosso. Seven members were present. Dr. Parker, of Corunna, was elected to membership in the society. Dr. Hal C. Wyman, of Detroit, gave a very interesting and instructive paper on "Biliary Surgery," which was thoroughly discussed by those present.

The annual election of officers resulted as follows: President, Walter E. Ward, of Owosso; vice-president, James A. Rowley, of Durand; secretary-treasurer, C. C. McCormick, of Owosso; directors, E. J. Carney, of Durand; W. T. Parker, of Corunna, and J. N. Eldred, of Chesaning; delegate, James A. Rowley; alternate, A. L. Arnold, of Owosso. JAMES A. ROWLEY, *Sec'y.*

Tri.

The Tri-County Medical Society held a social session in connection with the annual meeting on November 7, 1907.

The officers elected were as follows: President, Dr. J. M. Wardell; vice-president, Dr. V. F. Huntley; secretary-treasurer, Dr. W. J. Smith; board of directors, Drs. Abbott, Neihardt and Brodner; program committee, Drs. Recker, Wallace and Smith; finance committee, Drs. Moore and C. D. Miller; delegate to the Manistee meeting of the State Society, Dr. C. E. Miller; alternate, Dr. Brodner.

A banquet followed the business meeting. A number of toasts were responded to by the members and their wives.

W. J. SMITH, *Sec'y.*

Wayne.

Surgical Section, November 25, 1907.

Dr. W. H. Hutchings exhibited a patient in whom was shown the reaction which occurs, in case the patient is tuberculous, from dropping diluted tuberculin into the conjunctival sac.

The first paper of the evening was read by Dr. B. R. Shurly on "Improved Methods of Diagnosis of Diseases of the Larynx, Trachea, and Oesophagus."

Abstract.—Direct laryngoscopy and tracheoscopy were developed in 1897 by Kirstein and improved and given a more popular position by Killian and Jackson. Special speculæ are needed for laryngoscopy, tracheoscopy, bronchoscopy, and oesophagoscopy and the proceedure requires special skill. Direct laryngoscopy and tracheoscopy were considered. The first procedure is indicated where the use of the laryngeal mirror is not satisfactory, requires a local anesthetic (general in children), and should be preceded by atropine gr. 1-120 given hypodermically to check the secretion of saliva and mucus. This method is especially valuable in removing foreign bodies and giving local treatments.

As illustrative of the value of direct examination the diagnosis and treatment of papillomata of the larynx were considered. While earlier writers have claimed that papllloma of the larynx in a child demands tracheotomy alone and there should be absolute non-interference with the growth until the child can be treated as an adult, under direct illumination the larynx may now be entirely cleared of all growth. Four cases were then reported showing the advantage of these newer methods of diagnosis:

Conclusions—

1. Digital examination and direct laryngoscopy should be made in all cases of persisting stenosis.

2. Tracheotomy should be performed at once where dyspnea is moderate or severe.

3. The tracheotomy tube should remain in situ at least six months.

4. The growth may be completely removed by the aid of the bronchoscope or Mosher's laryngeal speculum.

5. Thyroidotomy is usually to be condemned. It is a method of last resort only.

6. Intubation is often useful as temporary relief until tracheotomy can be performed. No force should be used as it is impossible to insert the tube in some cases.

7. Papillomata and similar tumors should be

removed by endo-laryngeal methods alone where such methods are possible.

8. The modern treatment of papillomata should discourage the dangerous temporizing with sprays, inhalations, applications, etc.

9. The removal of a few papillomata by endo-laryngeal methods without tracheotomy is frequently followed by an increase of the warty growth.

The reading of the paper was followed by the exhibition of several instruments used in bronchoscopy and laryngoscopy.

The second paper, read by Dr. L. J. Goux, was entitled, "Obstruction to the Upper Respiratory Tract."

The paper dwelt with the general manifestations of nasal stenosis without specifying any particular class of obstructions.

The remote effect of imperfect respiration, particularly the influence of defective oxygenation of the blood, was especially considered.

The characteristic facial expression of these patients as well as the usual manifestations were enumerated.

Headache due to nasal stenosis was given special attention and was characterized as a morning headache which had a tendency to clear up during the day. In this particular it differed from headache due to eye-strain which usually developed during the day, becoming worse on close application. The eyes are often suspected of being the cause of headache while nasal stenosis is seldom suspected.

Pain in the temple is commonly due to hypertrophy or pressure of the middle turbinate on adjacent structures and the characteristic pain can often be produced by making pressure on the middle turbinate bone by means of a probe. When this can be demonstrated the pain lasts as long as the pressure with the probe is maintained. Turbinectomy usually results in complete relief of the symptoms.

Nasal anomalies were referred to as being an etiologic factor in some cases of dizziness and it was pointed out that in the process of exclusion in searching for the cause of this most distressing symptom the examination is not complete without investigation of the nasal chambers.

Cases typical of some of the special forms of obstruction were cited.

The treatment in nearly all cases is surgical and when indicated and properly executed is usually followed by marked amelioration or cure of the catarrhal symptoms as well as improvement of the general physical condition.

The papers called forth an interesting discussion.

Dr. F. B. Walker demonstrated by drawings and by organs removed post mortem from dogs a new method of lateral or end-to-end intestinal anastomosis.

C. E. SIMPSON,
Sec. Surgical Section.

Correspondence.

A Letter Describing the Clinics at St. Mark's and the Gordon Hospitals, London.

(Read at the meeting of the Saginaw County Medical Society, October 8, 1907.)

WILLIAM L. DICKINSON, M.D.
Saginaw.

Several of our members have visited London and its hospitals, and are acquainted with the physicians and surgeons connected therewith. As I was specially interested in the diseases of the rectum and colon, I spent the greater part of my time at St. Marks and the Gordon hospitals, which are exclusively for the treatment of fistula and other diseases of the rectum. I wish to speak of the cordial reception given me by the English profession, without a single exception, and can say that the American physician is always welcomed and made to feel at home by his brother practitioners.

At St. Mark's, I saw three different operations for internal piles, Mr. Edwards, the senior surgeon, making the ligature operation as follows: Having dilated the sphincters, the pile was picked up with forceps, and dissected away from anal margin, and a ligature tightly tied about its base.

Mr. Wallis makes a Whitehead operation, I think, in all cases, and he gets very fine results, as he is very particular regarding the after treatment. I saw him do several operations as follows: The patient having been anesthetized and placed in the lithotomy position, and the sphincters carefully and gradually dilated to fullest extent, taking in consideration whether the patient

is a strong, muscular man, or a weak, delicate woman, where too rough usage might do great damage to the sphincters.

After the dilatation, the piles will lie outside the muco-cutaneous line, and in plain view. He now makes an incision around, following the muco-cutaneous line, and the tissue is dissected off the external sphincters with a knife. The piles having been reached, he exchanges the knife for scissors and separates the mucous membrane from the muscles.

Mr. Wallis holds the mucous membrane with his finger and thumb, and is able to peel it off with the blunt end of the scissors in many cases. He clamps any bleeding vessel immediately. This separation of the mucous membrane is continued until the whole pile bearing area can be pulled down outside the external sphincters.

A transverse incision is now made above the piles from the outside, and a small forcep placed upon the upper cut margin of the mucous membrane. The incision is now carried around the mucous membrane, hemostatic forceps being applied wherever required. The assistants hold the upper cut end of the mucous membrane in position while four sutures are passed through the skin, muscle and mucous membrane, and tied tightly. Then the skin and mucous membrane are sewed together by a continuous suture of fine catgut. The wound is dusted with powdered iodoform, a pad applied and held in place with a T-bandage.

Mr. Wallis says in "Surgery of the Rectum," from which I have quoted quite freely, "The excellent results obtained by the operation just described are entirely due to the conscientious and skillful nursing which is given them. The aim for the first four days is to keep the wound as dry as possible. Any oozing or discharge of mucus is worked off, the surface dried with absorbent cotton, and redressed with iodoform powder and gauze. On the fourth night Mr. Wallis has castor oil given, and the following morning an oil enema. He does not keep the patient in bed for the bowel movement, saying the results are better if he gets out of bed, and sits on the commode.

Beginning on the sixth day, the patient takes one or two warm boracic hip-baths daily, remaining in the bath fifteen minutes; then the parts are dried, and dusted with oxide zinc and starch powder, and absorbent cotton applied.

To keep the surfaces apart a small piece of the cotton is inserted just within the sphincters."

Mr. Wallis does not get a stenosis following this operation, as he takes the precaution to see the patient at the end of three weeks, and examine for any cicatricial ring which may be forming, and should he find such a condition present, he passes his fingers through it, and it disappears; but should the cicatrizing area be very great it may be necessary to use a conical vulcanite plug for two minutes for four or five nights, when any tendency to stricture will entirely disappear.

At the end of the third week, the fibrous tissue is still young and can be easily stretched. Should one wait six weeks or more before making this examination, a hard ring will have formed, which would require a prolonged treatment with bougies.

Mr. Mummery after dilating the sphincters, places a small forcep on the side of the pile, and the assistant holds them while he cuts the pile away, leaing an incision longitudinal to the bowel. The wound is now sewed up with a continuous catgut suture.

At the Gordon Hospital, I saw Messrs. Ogle, Miles and Leaf making the ligature operation for piles; and also Mr. Murray at Middlesex hospital. Mr. Barker, at the University, makes the Whitehead operation, and is very careful not to touch the parts with his fingers, using instruments instead. I saw some very severe cases of tubercular ulceration of the colon and rectum, but did not learn of any new method of treating these unfortunate patients.

I saw both Messrs. Edwards and Miles operate for carcimona of the rectum, with very gratifying results, and at some future time, would be pleased to describe their methods, should you so desire.

News

The Council of the State Society will hold its January meeting at the Hotel Ponchartrain, Detroit, on Thursday, the sixteenth.

Dr. D. M. Campbell's office was gutted by fire during the past month and all his valuable records destroyed.

According to the decision in a court case at Owosso recently, Dr. David Austin, of Laingsburg, must pay Dr. Robb, of Flushing, $350.00 in thirty days or discontinue practice. The suit grew out of the purchase by Dr. Robb of Dr. Austin's office and practice.

Dr. J. W. Emmons has given up practice in Buchanan and removed to Kent City, near Grand Rapids.

Dr. W. A. Russell, of Richland, coroner, has disposed of his practice and property, and removed to Montana, on account of his wife's health.

Dr. A. M. Hume, of Owosso, has been appointed a pension examining surgeon to succeed Dr. Jabez Perkins, deceased.

Dr. E. H. Lathrop, of Hastings, has gone to San Diego, Cal., for the benefit of his health.

Dr. J. H. Day has moved from Lake Odessa to Alma.

Dr. E. H. Sichler has moved from New Baltimore to Detroit, opening an office at 508 Fine Arts Building.

Dr. Howard Post has moved from Belleville to Ypsilanti.

Dr. M. S. Grimes, of Detroit, has been selected as county physician for Wayne, to succeed Dr. E. B. Forbes.

Superintendent A. W. Shaw, of Harper Hospital of Detroit, has resigned, on account of illness, and has been succeeded by Mr. F. E. Moulder, formerly assistant superintendent.

The Paulina Stearns Hospital, a new institution in Ludington, made possible by the generosity of Hon. J. S. Stearns, was opened for public inspection Nov. 14.

Dr. Julius P. Henkel, chief surgeon of the Michigan National Guard, and resident in Detroit, is convalescing from an attack of paralysis.

Dr. R. L. King, for five years a practitioner in Caro, has decided to remove to Regina, Saskatchewan, and has sold his practice to Dr. Charles H. McLean, formerly of Detroit.

Dr. W. C. Henderson, of Coldwater, has resumed a portion of his duties, after a long illness consequent upon a spinal injury.

Marriages

Marinus L. Holm, M. D., of Lansing, to Miss Martha Kohhase, of Wells, Minn., November 28.

Dr. J. J. Law, of Nashville, to Miss Mabel Henion, in Battle Creek, recently.

A. B. Spinney, M. D., of Belding, to Miss Jennie Jackson, of Ionia, recently.

George P. Cooley, M. D., to Miss Annette Allen, both of Detroit, December 19.

Clark D. Brooks, M. D., of Detroit, to Miss Sallie H. Wier, of Annapolis, Md., November 20.

Orville L. Brooks, M. D., to Miss Neva Belle Hanlan, of Detroit, November 28.

Deaths

Artemus O. Wotring, M. D., Detroit College of Medicine, 1887, a member of the Michigan State and Lenawee County Medical Societies, was killed by a gas explosion in Ogden Centre, November 30, aged 46.

Dr. Watts J. Bachelor, a practitioner for thirty years in Oxford, died at his home on November 26, aged 58.

Washington A. Engle, M. D., University of Michigan, Department of Medicine and Surgery, 1857, a practitioner of Hartford for 50 years, died at his home, November 27, from senile debility, aged 81.

Theodore N. Stafford, M. D., Detroit College of Medicine, 1897, died at his home in New Troy, November 30, aged 35.

Frank A. Howig, M. D., a graduate of the University of Pennsylvania, and resident in Big Rapids 41 years, died at his home, December 10, aged 79.

Swabbing out a sinus filled with exuberant granulations with glycerin will often dehydrate them, making them fresh and healthy.

Stretching the anal sphincter alone will in many instances relieve an intense pruritus or a small prolapse of the anal mucus membrane.

A large tumor supposedly a growth of the ovary, may be a retroperitoneal mass, usually a sarcoma, having no connection with the sexual organs.

Progress of Medical Science

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Fibroid Tumors and Pregnancy.—In commenting upon several recent papers dealing with this important subject, GILLESPIE says that the cardinal points to consider are, what are the dangers attendant upon pregnancy and labor in this condition, and what are the relative dangers of myomectomy and hysterectomy. The tumor or tumors will probably increase in size rapidly during pregnancy. This increase in size is usually but temporary, and is due more to a condition of edema than of actual growth. In some rare instances the tumor disappears during involution. The patient is more apt to have septic infection after miscarriage or labor, and there is a little more risk of post-partum hemorrhage or placental retention. If the tumors do not involve the lower uterine segment they will not seriously interfere with normal delivery, although artificial assistance is often called for. If the condition is such that normal delivery is impossible, or would be fraught with grave dangers, Cesarean section should be practiced at full term and the tumor and uterus removed at that time. Hysterectomy is easier at this time than at any previous period, so that with little, if any, increased risk to the mother the child is given its chance for existence.

Myomectomy is a more dangerous procedure than hysterectomy or Cesarean section and hysterectomy, and its only advantage is that it enables us to spare the organ. But in only a small percentage of cases of fibroids can the operator remove all tumors, and when he cannot leave an organ free from disease it is of questionable propriety. To judge from the histories, none of these cases would run any risk until full term was reached except the risk of miscarriage. Does this remote risk justify the institution of treatment which will render almost certain the occurrence of this accident.—*Lancet-Clinic,* Dec. 7, 1907.

Perforation of the Uterus.—The uterus may be perforated by any instrument which can be introduced into it. It has happened most frequently with the curette and sound, with the latter especially in the days when it was much used for replacing a flexed uterus. It has happened with the use of every shape of curette, but perforation is more likely to take place if the spoon shaped instrument is used than when a broader ring curette is employed. It is especially liable to happen if the uterus is not pulled down to the vaginal outlet during the operation. Dressing forceps are particularly dangerous, but placenta and polyp forceps are safe in experienced hands.

There is sometimes a predisposition to injury on the part of the uterine tissue, as in pregnancy, septic infections, degenerating fibroids, hydatid mole, carcinoma and chorioepithelioma malignum.

Cases of apparent perforation are sometimes explained on the ground that the instrument has entered a dilated tube or that there has been a relaxation of the uterine muscle increasing the size of the uterine cavity. The literature on the former point is reviewed and the proven cases shown to be rare. The latter question is discussed at some length.

Permanent utero-peritoneal fistula may result from perforation, or the uterine wall may remain so thin (from unskillful curettage) as to give trouble in subsequent pregnancy.

If the perforation is small, as one made by a sound, in an aseptic uterus, the treatment consists in keeping the patient quiet. In a septic case the patient should be most carefully watched and with the advent of symptoms, a total vaginal extirpation should be done and drainage established. Intrauterine irrigation must be absolutely avoided in any case. If there are any symptoms of intraperitoneal bleeding, the posterior vaginal vault should be opened and the uterus carefully inspected. The perforation can then be readily sutured. If a perforation occur during the curettment of a carcimona, extirpation should be done at once, and a laparotomy in case there is any possibility that the intestines have been injured.

The man not trained for gynecological work should not curet a carcinoma, for such are never emergency cases. The general practitioner, however, must often treat cases of incomplete abortion. The rule of always giving an anesthetic, of making sure that the cervix is well dilated and using only the finger should be kept in mind.—*Zent. f. Gyn.,* Sept. 28, 1907.

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

Studies on Arteriosclerosis, with Special Reference to the Radial Artery.—THAYER and FABRYN, of Johns Hopkins, made pathologic studies of arteries in 61 cases whose arterial system had been studied clinically during life, the patients ranging from 56 days to 83 years. The material was taken from the radial artery at the wrist, from the aorta near the heart and also near the mesenteric artery, and from the mesenteric artery itself. Comparisons were made between pathologic and clinical findings. The palpability of the radial, other things being equal, depends on the thickening of the coats, especially of the intima. Thickening of the media is usually accompanied by thickening of the intima, and this coincident change is particularly noticeable in cardiac hypertrophy and chronic nephritis. The arteries which clinically were considered thickened were found to show connective tissue increase in the intima. Beaded, tortuous arteries usually proved to be due to calcareous changes in intima or intima and media. It is in the fifth decade that the connective tissue changes in the coats begin to be marked, corresponding to the usual clinical observation of thickened radials at the same period of life. The aorta and mesenteric artery showed changes practically identical with the radial, except that calcification occurs less often in the latter and plaques of fatty degeneration are common in the aorta but not seen in the radial.

The authors conclude that in old age a thickened radial is to be expected. That thickening earlier than fifth decade means unusual strain upon the arteries, or inherent weakness of arterial walls, rendering them unequal to combat normal stress. Thickening of the radial usually means thickening of other arteries, and when excessive, should be regarded as a danger signal.—*American Journal of Medical Sciences,* Dec. 1907., p. 811.

The Acetonaemic Conditions of Children.—LANGMEAD of London divides patients showing diacetic acid and acetone in three groups. *First,* those who show no symptoms except the acidosis, as in starvation, high fevers, gastric ulcer, etc. *Second,* those whose acidosis complicates some other well defined condition, as in diabetes, intracranial disease, intestinal obstruction, etc. *Third,* those who show symptoms referable to acidosis uncomplicated by other conditions. The "symptoms of acidosis' are apathy, coma, delirium, thirst, fever, febrile facies, acetone breath, nausea and vomiting, acetone, diacetic acid and B-oxybutyric acid in the urine. He describes three cases following anesthesia, and also gives post-mortem notes, showing the usual condition of yellow liver infiltrated with fat. He cites cases of cyclical vomiting which manifest recurrent acidosis. He regards the fatty degenerative changes as the result and not the cause of the altered metabolism, and he regards the underlying excitant as a toxemia, either of intestinal, febrile, or inorganic, origin. Such toxemia produces fat faster than it can be oxidized, and under certain conditions, as yet unknown, this imperfectly oxidized fat produces acidosis.—*British Medical Journal,* Sept. 28, 1907, p. 819.

Epithelioma of the Penis. An Analysis of One Hundred Cases.—J. DELLINGER BARNEY, of Boston, in a study of these cases, concludes as follows: "Epithelioma is practically the only kind of cancer attacking the penis, and in frequency forms only from one to three per cent of all cancers. It occurs most frequently during the fifth, sixth and seventh decades of life. Phimosis is pre-eminently the most important of its exciting causes." Circumcision is therefore a factor in prophylaxis. "Most cases seek relief during the first and second years of the disease, but it is not unusual to see cases of from five to fifteen years' duration. Pain occurs in 43.5% of all cases. Enlargement of the inguinal glands occurs in over 75% and in 60% of the glands are cancerous. Glandular involvement * * * is of rather late occurrence. Invasion of vital organs occurs in 15%." Recurrence after operation happens most often within one year. Operative mortality is one per cent. Gross mortality is 32% and 38% of cases are cured. The operation of choice is early amputation of the penis at the pubes with complete dissection of the groins. The length of life from time of onset in primary cases is three years and four months; in recurrent cases eight years and three months.—*Annals of Surgery,* Dec. 1907, p. 890.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Aphasia.—The distinguished French investigator, Pierre Marie, has put forth some new views as to aphasia. He maintains that aphasia has been grossly misinterpreted, upon grounds purely theoretical. He is disposed to deny that there exists in the left hemisphere an auditory verbal center in the first temporal convolution or that there exists a visual verbal center in the left angular gyrus, or that there exists a center for writing in the left second frontal convolution or a motor verbal center in the third (left frontal convolution). And he accordingly believes that the interpretations based on these long accepted assumptions are erroneous. He interprets aphasia rather as a disturbance of the intelligence; a disturbance which results in a special defect for the comprehension of language, and he poitns out that in most of aphasia cases ability is present to comprehend isolated words, short phrases, or the comprehension failing as sentences and ideas grow more complex. Marie regards the zone of Wernicke as an intellectual rather than an auditory center.

DERCUM holds that aphasia is a unit and not made up of sensory aphasia and motor aphasia, but that in the former the lesion involves the zone of Wernicke; while in the latter there is in addition an involvement also of the lenticular nucleus.

Cases have been reported in which the third frontal convolution has been involved in softening without disturbance of speech, as also cases in which this convolution escaped, but in which motor aphasia was present. Dercum then reports a case belonging to that group in which the lenticular zone and the white matter alone are involved in deep softening, the cortex escaping.

The lesions of the lenticular zone, he thinks, explain the anasthesia present and probably also the interference with motor speech.

F. X. DERCUM in the November, 1907, No. of the *Journal of Nervous and Mental Diseases.*

Arterio-Sclerosis in Relation to Mental Disease.—This article, citing cases in point, is thus summarized by its author:

1. "While arterio-sclerosis of some degree is a commonplace finding in cases of mental disorders, especially in advanced life, there are cases where the cardio-vascular disorders seem to be the central element in the clinical and anatomical picture.

2. Certain cases symptomologically described as melancholia, hypochondria, neurasthenia, etc., may be better grouped on etiological grounds as cases of arterio-sclerotic brain disorder.

3. In certain cases of organic dementia the arterio-sclerotic changes are obviously the most important element in the process and the term, arterio-sclerotic dementia, is justifiable, but the relation of certain mental symptoms to similar ones in the pre-senile and senile psychoses must be kept in mind.

4. The neurological picture in advanced cerebral arterio-sclerosis is still ill-defined, and for the differential diagnosis of the various organic dementias further clinical material is required.

5. In certain cases of epilepsy with onset in later life, the convulsions and general symptomatology are closely related to arterio sclerosis.

C. MAC FIE CAMPBELL, E. SC., M.E., CH. E.—in Nov., 1907, number of the *Review of Neurology and Psychiatry.*

Psychical Mutism.—A locomotive fireman, 22, on Aug. 24th, 1904, while on top of a freight car, ran against a live trolley wire, which struck him on the root of the nose. He said that the "current passed through him" and he fell on the roof of the car unconscious and continued so for 24 hours. He could swallow, move his tongue and mouth well, but could not speak. No serious organic injury could be found. He claimed to want to speak but was unable to do so. Hospital treatment and various expedients attempted in the hope of surprising him into speech proved unavailing. He came under observation in June, 1905, and was discharged Sept. 1st, 1905, unimproved. He was again admitted in Nov. '05, and on 26th, complaining of a headache, he attracted the nurse's attention by moaning and restlessness, his jaws chattered, head thrown back, arms and legs were in motion, eyes closed; pupils in moderate dilation, limbs non-spastic, knee jerks increased; fairly general analgesia. Pin-pricks caused no movement, except over nipples. Irritation from holding aromatic spirits of ammonia to his nose finally induced him to say, "Take the damn thing away, I do not want to smell it." He thereafter answered questions and on coming out of his attack had perfect possession of his speech functions.

Total loss of speech from purely psychic causes followed by sudden and complete recovery is rare and must be hysterical in origin.

J. K. MITCHELL in April, 1907, Number of the *Journal of Nervous and Mental Diseases.*

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

The Bottle Operation Method for the Radical Cure of Hydrocele.—Open operations for the radical cure of hydrocele may be classed as of three types:

1. Packing or tamponade of the sac, causing adhesive inflammation. 2. Resection of the sac or portions of it. 3. Eversion or backward suturing of the two halves of the bisected sac.

1. "Seton" or Open Packing. "Volkmann's Operation." The earliest use of the packing method always caused suppuration, as it preceded the antiseptic era. Later, when aseptic methods prevailed, it was found that sterilized gauze packing would bring about the same result without micro-organisms. This, to be effective, must go to the extent of causing somewhat intense irritation of the serosa and swelling of the scrotum, disabling the patient for rarely less than two or three weeks. The thickened parietal and visceral layers cause enough reaction to be somewhat painful and to require recumbent treatment. The method, nevertheless, is a very reliable one.

2. Excision of Sac Wall.—It requires less severe reaction,—theoretically, none at all—to cause plastic union between one serous surface and the dartos or connective tissue; hence, if the outer layer of the hydrocele sac be excised, and the visceral or that covering the testis remain, an excellent cure is obtained quickly.

Practically, excision of the sac is too bloody to be called a neat and rapid method. The bisecting cut along the anterior median line is bloodless, but the lateral cuts cross rarely less than half a dozen vessels, requiring separate ligatures. This takes away all the neatness and speed of the operation.

3. Eversion of Sac.—Jaboulay's method (called Winkelmann's method in Germany) consists in first bisecting the sac by a vertical incision along its anterior convex surface, after isolating it outside the scrotal skin. The two halves thus formed are then everted and brought together back to back behind the globus major and epididymis, so that the whole serous lining faces outward. Any one not a novice can make this dissection so nearly bloodless that the tissues do not become sodden.

4. The author's bottle operation is conducted as follows: An anterior scrotal incision is made as in the older methods. The tissues should be held tense and the dissection should be nice to the exact layer which will enucleate the translucent bladder-like mass from its bed.

Careful study of the funicular part of the sac is now to be made. Usually a little funnel continues one or two cm. up the cord. The extreme upper end of this marks the beginning of the cut into the sac. This cut is vertical, on the anterior border, and only about two cm. long. The incision in the sac is prolonged to its extreme upper end along the cord if the first cut did not do this. When the sac has been emptied, it is like a bottle or bag, with a small hole at the top. Dilating this slightly with one or two fingers, the orifice is held open and the testis is pushed up into it with the other hand. In a moment it can be squeezed through, and the whole sac will instantly be everted with the small buttonhole so closely surrounding the cord that it is scarcely visible. It will also be seen at a glance that there is no possibility of the testis returning into the hydrocele cavity. The short incision contracts, so as to fit around the cord, and the whole sac by its elasticity seems to collapse around the epididymis. Ordinarily, the largest hydrocele sacs when collapsed assume about the size of the testis, showing that their walls remain perfectly elastic. As yet the author has not tried the method on any very opaque, hypertrophied or thick-walled hydrocele. It is conceivable that some such old cases resulting from inflammation, injections, or former operations, might be difficult to enucleate from the scrotum, or to evert bringing ouside the skin.

The skin is quickly closed with clips or light suture, without drainage. Such wounds heal within a week. The patients get about readily on the third or fourth day, sometimes earlier. The amount of swelling about the testis is usually small, even in double hydroceles. Tenderness and pain are moderate or absent, and no fever and malaise are felt after the second day.

This operation is very suitable for local anesthesia, and therefore can be done on the aged without risk. Its results are in striking contrast with the old packing or open method. Koenig reports that the average confinement with this method was three weeks, and also that some patients were disabled fully as long by injection treatment, which also gives a large percentage of failures.

No complications have occurred in a considerable series of these operations in the author's clinic, and, so far as can be learned no recurrences. The recovery has without exception been rapid and practically painless.—E. Wyllys Andrews, *Annals of Surgery*, Dec., '07.

ACTINO THERAPY.

Conducted by

H. R. VARNEY, M. D.

The Opsonic Method in Skin Diseases.—The author states that opsonins, though not as yet isolated from the blood serum, possess a distinct action which can be estimated as reported by Douglas.

By comparison of various sera according to the technic outlined by Wright, one is able to obtain varying results which may be used for the estimation of the individual resistance, to the organisms in question.

The method has been proved to be accurate, within the limits of a 5% to 10% error which is admitted.

The opsonic method may be used for diagnosis or, in conjunction with the inoculations of bacterial vaccines, for treatment.

The diseases of the skin for which the method is useful are the primary and secondary staphylococcic infections and tuberculosis.

The writer's conclusions as to the therapeutic value of the opsonic method in localized infection of the skin are as follows:

1. The opsonic method in boils is always successful and is the only form of treatment for general furunculosis that is in the slightest degree reliable.

2. In sycosis the method is a valuable one, but must be continued for long periods in proportion to the duration of the disease, and is best combined with X-ray epilation.

3. In acne the treatment is uncertain, some results being astonishingly brilliant, others entirely negative.

4. In septic dermatitis and ulcers the treatment is of distinct value as an auxiliary.

5. In Bazin's Disease the treatment is somewhat uncertain, but it is often of help. In tubercular ulceration it is of great value.

6. In Lupus vulgaris the treatment alone is too slow and uncertain to be recommended. It is according to Bulloch a valuable auxiliary in those patients who relapse after Finsen's treatment, and I have found it of value combined with X-rays.

Read by Dr. Arthur Whitfield, London, Eng., before the Sixth International Dermatological Congress, New York City, Sept., 1907.

Reports of 800 Dermatological Cases Treated with X-Ray and High Frequency Currents at the Mount Sinai Hospital.—The diseases treated and the final results obtained with these forms of treatment are briefly summed up as follows:

Epithelioma. Results accomplished depend upon proper choice of cases. Most favorable are those situated on the surface of the epidermis. The best results are achieved by a combination of X-ray and high frequency spark. In deep-seated carcinoma there is very little to be expected. It is more encouraging in the various forms of sarcoma.

In *acne vulgaris,* the results are very gratifying, while in acne rosacea there is very little to be accomplished. In psoriasis the value of the X-ray is well established, also in different forms of eczema.

Lichen chronicus, lichen planus, and *lichenoid eczema* conditions are more stubborn, but generally yield to X-ray treatment.

Lupus erythematosus does well with the high frequency spark treatment, but it often recurs.

Lupus vulgaris affecting the mucous membrane is best treated with the X-ray, while other parts of the skin with the high frequency spark.

Various types of *verrucae* and *naevi* can be readily destroyed with the high frequency spark.

In *keloid,* to expect permanent results, we must persist with the X-ray until a fair degree of dermatitis is produced.

Folliculitis decalvans yields well to X-ray treatment.

Pruritus is beneficially affected by both the X-ray and the high frequency current.

Mycosis fungoides can be indefinitely controlled by the X-ray, but not cured. Treatment must be kept up, or lesions return; while in *rhinoscleroma* we get probably a definite cure.

In *sycosis, favus* and *trichophytosis capitis* the results accomplished with the X-ray are very satisfactory, but in the latter two we must use other treatment in addition.

Hypertrichosis can be cured with the X-ray, but requires very careful technique.

Hyperidrosis may be benefited, but only after a long series of treatments.

Report presented by Dr. Samuel Stern at the Sixth International Dermatological Congress, New York City, Sept., 1907.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

Massage, an Occupation for the Blind.—L. Webster Fox says the very important question of providing employment for intelligent blind persons is now occupying more than ever, the attention of all who are interested in their welfare, and certainly none is more solicitous for their welfare than the ophthalmologist.

From time immemorial massage has been practised by the blind in Japan, and a few years ago, the "Institution for Massage by the Blind" was introduced in England, where it was received with enthusiasm, Sir Anderson Critchett being one of the directors. There are now 21 masseuses and 15 masseurs on the list. In this country, for some years past, instruction in massage has been given to blind persons in the Philadelphia Orthopedic Hospital, and several have gone forth from that institution certified as having gone through the regular course of training. The author speaks of the satisfactory work these graduates have done, and believes if the profession would more generally hold out a helping hand to the blind by testing the work they do, just so soon will the public confidence in them be assured and a fairly remunerative occupation for the blind be definitely established.

The Philadelphia Orthopedic Hospital has a "Committee on Schools," of which Dr. Fox is chairman. He says no course of instruction is given anywhere in this country equal to that given at the Orthopedic Hospital. The instruction is carried on in a systematic manner by competent instructors under the supervision of one of the ablest staff of physicians in Philadelphia.

After reviewing the work done in Japan and England, giving extracts from letters from men and women working along this line, he concludes as follows:

"The Orthopedic Hospital has opened its doors for all blind pupils who wish to prepare for this work, and it is the wish of the Board of Managers that this school may have many applicants, so that the good work inaugurated by our staff of physicians may continue its instruction in years to come, to the advantage and benefit of this unfortunate class—the blind."—*Ophthalmology,* Oct., '06.

The Eye in Death.—De Micas discusses the value of the varying conditions of the eye in and after death as certain signs of death, and, further, the varied state of the eye in death from special causes, in particular diseases or from violence. Except in death in local or general anesthesia, the loss of sensibility of the conjunctiva, especially in the limbus, is of great value.

The early dilation of the pupil after death and its almost immediate loss of sensibility to light or to mydriatics or miotics is important. The dilatation passes off in a few hours and it is also liable to some variation in cases of disease such as iritis, cerebral conditions or poisoning. The loss of irritability of the iris is of great importance, though the reaction to light has been observed to persist for a time after death from cholera.

The loss of reaction to drugs as a sign of death is not invariable because in life some irides will not react to atropine or eserine. Ophthalmoscopic examination is possible for a few hours after death, but the cornea soon loses its transparency, the structure becomes glassy, rumpled, flaccid, and soft. These signs, the author says are certain, but may be delayed in cases of drowning. The sclerotic changes in color through yellowish tints, to bluish, to blackish.

The author quotes Louis: When the globe preserves its natural firmness it cannot be certain death has occurred, whatever other signs of death there may be. After death from violence the eyelids are generally open, though there were many exceptions in the experiments conducted on animals slaughtered for food.

Finally, the author deals with the conception of authors of romances, who describe so vividly the photograph of the villain imprinted upon the eye of the victim; when in truth he says, "it only exists in the heated imagination of the fluent scribe."—*Recueil d' Ophthalmogie,* 1906.